

HOME HYGIENE AND PREVENTION OF DISEASE

NORMAN E. DITMAN





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BY
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INTRODUCTION

One of the most important developments of modern medicine has been the fact that it is now realized that it is far better to avoid than to contract illness, even if the modern methods of treatment have robbed disease of many of its old-time terrors. A consequence of this has been that the modern physician takes every opportunity to instruct his clientele how to avoid contracting disease.

It is with a belief that this part of the physician's instructions can be advantageously supplemented with information which the average person can have constantly at hand that has made the publishing of this book seem distinctly called for. Simple as a physician's advice may seem for the avoidance of any disease, it is often necessary to have this advice in a form where it can be more carefully studied and digested if we are to develop a "hygienic sense" which will enable us more or less instinctively to avoid the paths which lead to disease.

The public as a class has been saved much suffering and avoidance of future inconvenience by the knowledge which it has assimilated on *first aid to the injured*. Similar benefit should result from popular appreciation of the methods of *first aid to the sick*. For often, in the case of illness "a stitch in time saves nine."

One justification of a popular work of this kind is that not only can its readers render the best aid to the incipient or slight invalid; but they should be enabled to better appreciate when an ailment has become serious enough to require expert medical attendance, or when a disease is from the outset beyond the aid of unskilled hands.

There are few in our modern era of civilization who do not understand the workings and failings of automobiles, engines, phonographs, sewing machines and household appliances. It would seem the part of discretion therefore if we knew at least as much about a few of the commoner workings and failings of the human body—a machine of

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far more importance to all of us than all the mechanical appliances in the world.

It is with this purpose in view that the author of this work ventures to place it in the hands of the public, expressing, at the same time, the hope that some of the more technical of the information imparted will be employed with discretion. To those living in rural districts where the service of physicians is difficultly obtainable it is hoped that the information herein contained will be a means of saving life and avoiding unnecessary suffering. To those living less far from the trodden highways it is hoped this work will prove to be an aid to the physician—educating the human kind to a more intelligent appreciation of his efforts, lessening the numberless irritations and infinite inconvenience resulting from the human gad-fly “minor ailments”; and materially lightening the load of long-suffering humanity from preventable sickness.

In many cases it is difficult to judge from a patient's symptoms the precise character of the disease from which he is suffering, and it is obvious that except in the simplest cases no one but a medical man can form a reliable opinion. It must be made clear that the object of this book is not to displace the family doctor, but to furnish the reader with general information regarding medical subjects; and that while pains have been taken to ensure accuracy, the author and publishers can accept no responsibility for errors. Nearly all the medicines mentioned in the text (except those marked POISON) *may* be obtained from licensed druggists without the prescription or signature of a medical man, but persons who treat themselves in accordance with the directions contained in the book must realize that they do so on their own responsibility.

N. E. D.

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Abscess.—When some part of the body is damaged by injury or poisoned by a germ, inflammation is set up, and the symptoms of heat, redness, swelling, and pain, begin to appear. If the supply of good blood is sufficient to overcome the poison or to repair the damage done, then the *inflammation* grows less and less until at last the mischief is as far repaired as ever it can be. But if the poison is too strong, or the damage too severe, then the inflammation increases in intensity, until there is formed a swelling which has in the middle of it an isolated collection of dead blood-cells, constituting what we call “matter,” or “pus,” surrounded by a red ring of inflammation. The results of the struggle between the blood and the poison are thus walled in so that they cannot do much more damage, and this state of the part is called an *abscess*.

If possible we try to avoid the formation of an abscess, either by destroying the bacteria causing the trouble, by helping the inflammation or by relieving the process by cutting into it and washing out the poison.

The first may be accomplished by applying wet dressings composed of sterile gauze saturated with a solution of bichloride of mercury (1–2000) or aluminium acetate.

The inflammation may sometimes be helped by causing an increased flow of blood to the part by applying a vacuum cup. Warm applications may hasten the formation of an abscess, but when an abscess has once formed the sooner it is opened the better. If, on looking at an inflamed swelling, you can see a yellowish spot anywhere, then the swelling has become an *abscess*, and ought to be opened at once, and the pus let out.

Nowadays the fear of the surgeon's knife is unnecessary. A doctor will always save the patient pain by using some

anæsthetic to deaden the feeling in the part. (*See* “Anæsthetics.”) And the sooner the cutting is done the smaller will be the *scar*, and the sooner the whole trouble will be over.

Acidity (Sour Stomach, Heartburn).—This is not a disease in itself, but merely one of the symptoms of indigestion or dyspepsia. It is a sign that either too much food is being taken, more than can be thoroughly digested, or that there is something radically wrong with the digestive process—that is, with the kind of food taken. A change is needed. Not that you must go away to the seaside, but that you must alter your mode of living, eating, and drinking. The sour taste in your mouth, the feeling of weariness after a night's rest, the dream-harassed slumber—all these may be removed by simple means. First, get your teeth attended to, so that the food may be properly chewed. Then, have your meals at stated intervals punctually. Avoid all spirituous liquors, drink *only* at the end of a meal, avoid too much meat, and pastry, and cheese, and pickles; and take a teaspoonful of bicarbonate of soda and a teaspoonful of carbonate of magnesia in a tumbler of water every night at bedtime. In addition, go to bed early, rise early, take plenty of exercise, and your “sour stomach” will soon be only a memory of a disagreeable past. (*See* also “Indigestion.”)

(1) For acidity and sour-smelling diarrhea in children under 10:—Sodium bicarbonate, 2 grains; mercury and chalk, 2 grains; magnesium carbonate, 5 grains. (Mix and make a powder to be taken every other night.)

(2) For acidity, heartburn and painful digestion:—Liquor of bismuth, 1 drachm; infusion of quassia, 1 ounce. (This draught to be taken three times every day.)

(3) Powders for acidity and heartburn:—White bismuth, 10 grains; magnesium carbonate, 10 grains. (Make a powder to be taken in half a bottle of soda water twice a day.)

Acne.—(*See* “Blackheads.”) The little pores and follicles in the skin sometimes get blocked up by dirt, and as described under “Blackheads,” there remain little tiny pouches of fatty matter, which can be squeezed out by pressure with a key, or by the finger-nails. Sometimes the dirt which blocks the entrance to the pores remains fixed in the tubes, and then the blackheads become red and in-

flamed and are called *acne spots*. These pustules, or small abscesses, presently come to a head, and then burst, discharging matter. This matter—*pus*—is poisonous, and if carried by scratching finger-nails to another part of the skin, causes fresh acne spots there. Acne spots leave unsightly scars. In older people a variety of “acne” is apt to appear on the nose, especially on the red shiny nose of the alcoholic drunkard.

Treatment.—In young people too much smoking, and indigestion due to bolting the food are the general causes of the complaint. The first and last of the treatment is summed up in the word *cleanliness*. The skin must be kept very clean indeed, not only by frequent washing, but by rubbing violently with rough towels after the washing. The rubbing makes the skin red, and that is what is wanted, for the increase of blood improves the nourishment of the skin and helps it to fight against the evil effects of dirt and germs.

Thin people with acne ought to take cod-liver oil, and fat ones should drink a purgative mineral water, or take a Seidlitz powder every morning. When the acne pustules are already formed, steam the skin, and clean it well with friction and soap, and then, using a new needle, prick the yellow point in each spot and squeeze out the pus, and wipe it away with a cloth dipped in peroxide of hydrogen. Then bathe the skin well, and rub in *white lotion*. This may be reapplied several times during the day.

All the cotton-wool, gauze or lint which has been used is to be burnt, and the needle also. And the hands should be washed, and the nails scrubbed, with carbolic soap.

Adenoids.—Adenoids, or, properly speaking, “adenoid vegetations,” are overgrowths of the glandular tissue which is found in the back of the upper part of the throat, just where the nasal cavity opens behind. They are allied to the enlarged glands which are so common about the angles of the jaws in children and in their necks; and their presence causes a great susceptibility to catching cold. The adenoids, if plentiful, block up part of the passage through which breathing takes place and prevent the proper development of the lungs. Not only that, but they cause deafness. About ninety per cent. of all the cases of deafness among children are due to adenoids. Children with adenoids generally look stupid, keep the mouth open, and

breathe through it, and are listless and lack concentration. Lastly, such children are often nervous and irritable and are prone to bed-wetting and to have nightmares.

Treatment.—If the child cannot sleep with its mouth shut, or play without getting out of breath, the adenoids ought to be removed by operation. There is nothing else of any use.

Age and Weight.—The proper relations between age and weight are shown in the following tables; which, however, are not to be taken as representing an invariable standard. Many persons of less weight than is here shown enjoy excellent health.

I.—CHILDREN.

| Years of age | Boys | Girls |
|--------------|------|-------|
| | lbs. | lbs. |
| 5 | 50 | 40 |
| 6 | 54 | 43 |
| 7 | 57 | 48 |
| 8 | 60 | 52 |
| 9 | 64 | 57 |
| 10 | 69 | 62 |
| 11 | 73 | 69 |
| 12 | 79 | 78 |
| 13 | 84 | 89 |
| 14 | 92 | 98 |
| 15 | 103 | 106 |

II.—ADULTS.

| Male | | | Female | | |
|--------|-----|--------|--------|-----|--------|
| Height | | Weight | Height | | Weight |
| ft. | in. | lbs. | ft. | in. | lbs. |
| 5 | 2 | 126 | 4 | 10 | 98 |
| 5 | 3 | 133 | 4 | 11 | 102 |
| 5 | 4 | 139 | 5 | 0 | 105 |
| 5 | 5 | 142 | 5 | 1 | 110 |
| 5 | 6 | 145 | 5 | 2 | 114 |
| 5 | 7 | 148 | 5 | 3 | 121 |
| 5 | 8 | 155 | 5 | 4 | 128 |
| 5 | 9 | 162 | 5 | 5 | 135 |
| 5 | 10 | 169 | 5 | 6 | 139 |
| 5 | 11 | 174 | 5 | 7 | 148 |
| 6 | 0 | 178 | 5 | 8 | 158 |

Alcohol, Acute Poisoning by.—When spirits are given to children, or when adults go in for a debauch and drink excessive quantities of alcoholic liquors, the alcohol acts as a deadly poison and sometimes kills on the spot.

If death does not occur, the drinker to excess becomes more or less collapsed, his muscles are relaxed and he lies helpless and perhaps insensible. If left in this state he may sink and die, or he may perhaps sleep it off, or he may catch inflammation of the lungs and die of that in a very short time. The treatment is to empty the stomach first; give a drink of warm mustard and water. When the doctor comes he will probably give a stronger emetic, if the mustard-water has not yet acted, and then will administer hot, strong coffee injections into the rectum (or back passage) with a Higginson syringe, and rouse the patient by every possible means. Later on the sick man will require a long rest and plenty of liquid nourishment.

The delirium, which sometimes comes on at the end of a long spell of drinking, and which is known as “D.T.’s” or Delirium Tremens, may be fatal after a few hours of horrible suffering and mental agony. Careful and constant nursing is required, sleep and plenty of food. These cases should be treated by a doctor.

Alcoholic Drinks, Moderation in.—The writer pleads for *moderation* in the drinking of alcohol, as in all things else—for conscience sake, for the stomach’s sake and for the sake of society, the comfort and well-being of which all are bound to consider.

Probably never, throughout the world’s history, has been seen so widespread and drastic a movement against the use of alcoholic drinks as the modern so-called Temperance Movement; so-called because the most of the reformers aim, not at “temperance,” which means moderation, but at total-abstinence. It cannot be denied that there is much that is admirable in this movement in a time of excessive drinking, and that the motives of the promoters are lofty and command respect. Seeing around them the millions who are being made unhappy, unhealthy, criminal, or mad, by excess of alcohol, the total abstainers are teaching that even the moderate use of alcohol is full of danger, and that everyone owes it to himself to give up every form of it. The last word of science up-to-date is definitely on the side of the reformers, and against alcohol even in moderation.

“Even the smallest doses,” says the scientist, “lessen energy and efficiency to some extent, and have the inevitable reaction of depression.” These truths are pretty generally known by this time, and if, in consequence, all who dearly value their health do not at once become total abstainers, it is probably because they realize that most people have funds of health and energy within them, far greater than are required in the mere daily routine of life; and they are of opinion, too, that with that superfluity of energy they ought to be allowed to do as they please. To be a lifelong total abstainer means to be quite safe from a host of diseases—to be on the safe side entirely as regards the diseases due to alcohol. It means never to be brain-fuddled, never to be sentimentally maudlin; easily to avoid being grossly impure or vicious; or at any time entirely at the mercy of ruffianly men or scheming and evil women; and lastly, it means to save much money which would otherwise be spent on the vices which seem to be inseparable from excessive indulgence. And the really healthy youth, starting in life with an equable commonplace temperament, a fair knowledge of the possible evils of drunkenness, and no drinking companions to prompt him, would almost certainly prefer to do without alcohol altogether, and would go on his way rejoicing, healthy, happy and sober-minded—even if a bit of a prig.

The moderate drinker, on the other hand, desirous of an occasional emotional excitement in the dull routine of life, lives in a different set of circumstances. He knows, or may know, of loftier flights of imagination (as well as deeper depths of depression) than the teetotaler; he has generally more sympathy with the poor, the afflicted, and the tempted, than the total abstainer, who is too apt to be self-righteous. Among the moderate drinkers have been some of the world’s greatest men and most honored names.

All the serious disadvantages of alcohol are connected with its *abuse*; it would be ignorant and foolish to deny the advantages of its use. Just as a tired horse at the sound or touch of the whip makes a grand effort to complete its task, despite fatigue, so will a man or woman sometimes overcome a serious difficulty by the help of the stimulus supplied by alcohol.

The great majority of mankind in every land have always used alcohol, more or less in moderation; the general

feeling everywhere has been always against the abuse of it. Hence arises the question, so very difficult for the individual to solve—"What is moderation?"

We have all of us seen plenty of examples of men and women of advanced age, who are in good health, and who are known to have drunk beer, cider, wine or spirits all their lives; so that there can be no doubt that it is possible, for some of us at any rate, to enjoy the benefits of alcohol in moderation, and to reach a healthy old age.

Now all alcoholic beverages produce, in moderate doses and well diluted, a certain pleasurable effect called *stimulation*. If the majority of alcoholic drinks were not as shamefully adulterated as they undoubtedly are, people would find that the stimulant effect came sooner and with smaller quantities, and that the after-effects are less disagreeable. It is the cheap adulterated rubbish that nearly every publican sells so much of to the poor which does harm to those who honestly desire moderation. The drink manufacturer makes large profits, and almost in every case adds something to the liquor he sells to increase the thirstiness of the customer. No wonder moderation is difficult to maintain.

By a "stimulant" effect we mean a sense of well being, an elation, a hopefulness, warmth, and good humor. The same small dose gives appetite, increases the rate of the pulse, and supplies, sometimes, fresh energy for a disagreeable task.

Now, every stimulant effect has a corresponding period of depression. This will be noticed, perhaps, an hour afterwards, and may last an hour or two; or the period may be spent in sleep, when the depression passes unnoticed and recuperation takes place as well.

When a hard task has to be long continued, even a small dose of alcohol does more harm than good, and to repeat the dose will do even more harm. After a long task is completed a dose of alcohol is comforting, sedative and refreshing and promotes the sleep that is so greatly needed. One thing is certain, namely, that alcohol does not confer any additional working power. It may give a temporary stimulus to body work or brain work, but reaction succeeds, and leaves the body and mind less active than before.

We come then, to this conclusion, that the greatest difficulty, as regards moderate drinking, lies in the fact that

just as no two persons are alike in size, weight, constitution or appetite, so the quantity of alcoholic liquor which will help one man and do him no harm, repeated daily for years, may entirely ruin a man who has weak organs or some disease of the heart, liver, or kidneys. What may be moderation in you may lead to my early death. How then is a person to judge whether he may take any alcohol or not, and how much, and how often?

The answers are, after all, fairly definite. Drink none at all if you desire perfect safety, and especially if any relations or ancestors of yours were of drunken habits. If you *will* drink, drink as little as you can, especially if your life is sedentary and you cannot get much exercise. *Drink*, in any case, *only at meal times*, and you will not go far wrong. Set your face against the senseless parrot cry, "Come and have a drink," and the foolishness of creating an artificial thirst, which leads to the benefit of one person only—the drink-seller. It is natural and proper for young people to like convivial society, but the society of the public-house bar has nothing to recommend it. Young women do not find it necessary to be continually taking nips of alcohol to bring out their wit and gayety, and young men would do well to bear the fact in mind. There is nothing "manly" in the silly sleepiness, or the bubbling frothy gayety induced by too many drinks. *Directly you feel the stimulus of the first drink, alcohol has done all the good in its power, and more alcohol does harm.* It is when the stimulation is felt, of course, that there is the greatest temptation to secure some more, and then begins the poisoning of the system and the overworking of the liver and kidneys. Actual experiment has shown that from 1 ounce to 1½ ounces of *absolute* alcohol represents the quantity of alcohol which a healthy man may daily consume without ill effects. (See also "Beverages.")

Anæmia.—*Anæmia* means *bloodlessness*, but nobody is bloodless, and so the word is used to mean any state of health in which the blood is not of as good a quality as it should be. The pink color of the lips and other "mucous membranes" is due to the red color of the blood which circulates under the surface of them. A person may be anæmic (or poor blooded) because he has lost a quantity of blood by accident, or because he is badly nourished, or because he is poisoned by some disease, or chemical poison

such as *lead*. Or he may be anæmic because his blood-making powers are not up to the mark. We shall describe only the more common forms of anæmia, such as is *not* caused by loss of blood.

1.—CHLOROSIS or Green Sickness. This is the anæmia so common in young girls about 13 or 14 years of age. In a bad case of this kind of anæmia, the girl looks pale, or yellowish and sallow-tinted, her lips pale pink, her cheeks a little flushed. On the backs of the hands the veins show pink through the whitish skin instead of purplish through a pink skin. She is languid, weak and tired, and is liable to headaches, giddiness, fainting-fits, shortness of breath on going upstairs, and swollen ankles at bedtime. Her appetite is poor and she complains of a feeling of a heavy weight on the chest after meals. At the same time, she may be fat, or at any rate plump. Such girls are very often emotional and hysterical (*see* “Hysteria”) and full of sentimental sickly fancies. They nearly always have some disturbance of the female functions; very often in anæmia the courses stop altogether, and the girl grows irritable and apt to shut herself up or moon about alone.

Treatment.—This may be summed up in a sentence. *Take iron and keep the bowels freely open*. Iron, in some form or another, will have to be taken continuously for three months or more. Iron, if given in large doses and often enough, will cure nearly all cases. But even iron is useless unless the bowels are kept freely open. This is Sir Andrew Clark’s medicine for chlorosis, and it will be found suitable for a large number of cases, though not for all:—

Sulphate of magnesium, 6 drachms; sulphate of iron, 24 grains; aromatic sulphuric acid, 1 drachm; tincture of ginger, 2 drachms; compound infusion of gentian, to 8 ounces—a sixth part to be taken twice a day.

2.—ANÆMIA in Adults. The treatment of this must depend upon the cause of it. Lead-poisoning (*see* “Lead-Poisoning”), gout, syphilis, kidney-disease, malaria, severe bleeding piles, discharges, stomach inflammations—all these may be causes of anæmia.

Iron, given in some form which will not upset digestion, is the real cure for anæmia. To begin treatment the patient must take a smart purge of Epsom salts, then continue

with iron and a bitter tonic like quinine. Thus—Tincture of perchloride of iron, 10 fluid drachms; sulphate of quinine, 1 drachm, 20 grains; glycerine, 2 fluid ounces; water to 8 fluid ounces. Take two teaspoonfuls of this mixture in a wineglassful of water thrice daily after meals.

Persons who are very weak as well as anæmic may find the following pill very useful:—To make one pill—Arseniate of iron, a quarter of a grain; reduced iron, 5 grains. Take one pill morning and evening after meals.

One of the most widely used of all iron preparations in the treatment of anæmia is Blaud's pill in combination with cascara or some other laxative. There is another form of anæmia known as pernicious anæmia which is difficultly curable and which may terminate in death. Therefore in the case of any anæmia which does not respond readily and quickly to the ordinary modes of treatment for anæmia, a good physician should be quickly consulted.

Anæsthetics.—This is the word which means all the different medicines used to send people to sleep—the artificial sleep and insensibility to pain, called anæsthesia. The art of using anæsthetics is now so well understood that no one need be afraid of them. A very few deaths occur every year from anæsthetics in the case of people with unsuspected bad heart disease or broken-down constitutions.

The chief drugs used are ether, chloroform and nitrous oxide gas for producing artificial sleep, and cocaine, eucaine and ethyl chloride to produce insensibility of the skin. The choice of anæsthetic must, of course, be left entirely to the judgment of an expert, but as a matter of fact there are almost no cases of illness (in which an operation is really required), for which a suitable anæsthetic cannot be found.

Aneurism.—Inside the blood vessels, of course, there is always a great pressure of blood, caused every moment by the beating of the heart, which pumps blood round the whole body. The pressure is great, and the blood vessels (arteries and veins) have to bear it without giving way. This they could not do unless they were elastic, as in fact they are. The arteries are elastic tubes, dilating when more blood rushes through them, and contracting when there is less blood. An artery never ruptures, even when the heart is beating furiously, so long as it retains its

elasticity. But in old age the arteries become less elastic, less able to cope with sudden alterations of pressure, and the same thing happens even in youth in the presence of such diseases as gout, syphilis, and alcoholism. The weakening of the arteries in these diseases may affect all the blood vessels of the body, or only certain of them, or sometimes only small patches on a very few of them. This disease of the arteries is called *atheroma*, and everyone with atheromatous arteries who is subjected to physical strain or hard manual labor, is liable to have an aneurism. An aneurism is a blood-tumor connected with an artery and caused by the weakened inner wall of the artery dilating and giving way before suddenly-increased pressure of blood. Once an aneurism is formed, it has a slight tendency to self-cure, and will get well spontaneously if suitable medical treatment and nursing can be obtained. Of course, the signs and symptoms of an aneurism depend altogether on the position of it—it may be behind the knee, in the chest, in the lungs, in the abdomen, or almost anywhere else. The symptoms are always pain, more or less, and the results of the pressure on other organs. Nothing more can be said here about aneurisms; they are in no way suited for home-doctoring, and, in fact, often tax the ingenuity and skill of the cleverest and most experienced medical man.

Angina Pectoris, or BREAST PANG, is a sudden cramp of the heart itself. The first attack often proves fatal, but some people have several attacks before they die. The pain is intense, like no other pain on earth, and accompanied by a fear of impending death. It lasts about a minute. The cause of the condition is almost unknown.

Persons who have had one attack must regard themselves as likely to have another, and they should always carry about with them small glass capsules of amyl nitrite, the vapor of which, released by breaking the tube, is to be inhaled by the patient. Recurrence of the attacks may, perhaps, be prevented by avoidance of excitement.

Antiseptics are substances, mostly of a chemical or mineral nature, which possess the property of arresting or preventing the growth of bacterial organisms which are capable of producing poisonous substances in animal tissues with death or decay of the body cells. The changes which take place in a wound or ulcer or sore when germs

get into it are called *septic processes*, *sepsis*, or putrefaction. (See also "Abscesses" and "Inflammation.")

The choice of an antiseptic must depend upon the purpose for which it is to be used.

The following is a list of the better known antiseptics.

Bichloride of Mercury or *Corrosive Sublimate*. Prepared in tablets. Used in strengths of 1 in 1000 or in 1 in 2000 parts of water, for inflammatory processes of bacterial origin.

Peroxide of Hydrogen. Used in full or $\frac{1}{2}$ strength to cleanse dirty and infected wounds.

Boracic Acid. Saturated or $\frac{1}{2}$ saturated solution. For mild inflammations of mucous membranes.

Listerine, *borolyptol*, *eucalyptol*, *borine*, *alkalol* and *glycothymoline*. For toilet antiseptic purposes, as mouth washes, etc.

Alcohol, and *Tincture of Iodine*. Both are good, in full or $\frac{1}{2}$ strength, as skin antiseptics when the skin surface is not broken.

Potassium permanganate. One in 250 parts of water. An active oxidizing agent with antiseptic and deodorizing properties.

Carbolic acid is little used nowadays on account of the danger resulting from strong solutions or when it is incompletely dissolved.

Among the best known antiseptic powders are *iodoform*, *dermatol* and *aristol*.

Apoplexy.—This is the medical name for a "stroke." The person affected falls down as if struck, unconscious, breathing heavily and snoring. Before the attack there are generally some warnings, such as headache and sudden giddiness on stooping, noises in the ears, temporary deafness or blindness, squinting, nose-bleeding, vomiting, depression, sleepiness, thick speech. Certain persons are more liable than others to have a stroke. Such are the sedentary, the high livers, with fat stomachs, large heads, florid cheeks, and short thick necks, and persons over fifty. Intemperance and its resulting kidney disease make people very liable to apoplexy.

A *stroke* may have various results—complete recovery occasionally occurs; some paralysis of the hand, arm, or leg may remain, with or without loss of the faculty of speech; or death may occur. An attack of apoplexy may

come on in one of three ways. (1) The patient falls down unconscious, with red face, snoring, and convulsions; or (2) he has a violent pain in the head, is pale, sick and faint and gradually becomes unconscious; or (3) he suddenly becomes paralyzed, but does not lose his senses. He may recover or get worse. Sometimes you see a man in the street "in a fit," and the fit may be epileptic or apoplectic, or perhaps only drunken. It is sometimes extremely difficult even for a doctor to decide whether a man is drunk or ill, and whether he ought to be left to the police or carefully looked after. Such a man in a fit may be both drunk and ill, or might have become ill and taken some alcohol to cure himself in vain. These "fits" are quite beyond the power of the ordinary layman to deal with. He ought *on no account to administer brandy or any strong alcoholic drink*, unless he chooses to run the risk of being censured by a coroner, and the sick man's death attributed by the doctor to his interference. All he can do is to give the sufferer as much air as possible, to loosen belts, bands and collar, and prevent his damaging himself in his struggles, and to await the doctor's arrival.

Appendicitis.—As most people know, the abdomen contains, coiled up in it, a very long tube (about 26 feet, in fact), called the intestine, or gut, or bowel. In this tube the food after leaving the stomach is mixed with various digestive juices, such as the *bile*, and when ready, is absorbed into the blood vessels of the gut, and thence into the general circulation, to be made into blood fit to nourish the body. Now, the tube which extends from the stomach onwards for 20 feet, is a narrow tube, called the small gut; then begins a much larger tube which goes on to the back passage. This larger tube, the *large intestine*, begins at a spot just beneath the skin of the belly, on the right side, close to the bony prominence of the hip. At a few inches from the beginning of the large bowel, there is, in most people, a little blind tube hanging from it. This little bit of a tube is only about as big as a goosequill, from two to five inches long, and is of no use whatever. It is called the *appendix*, and sometimes the food or foreign bodies as they pass along through the large intestine, set up irritation and inflammation in it. For instance, a cherry-stone, swallowed, *may* irritate the appendix and so cause it to inflame, and bring on appendicitis itself. The abscess

which forms as the result of all this bursts at last into the belly cavity, or is opened by the surgeon. But not all cases of appendicitis get as far as that.

The *causes* of appendicitis are many and various. While nobody knows how to avoid getting the disease it is believed that of any one cause constipation is the most potent.

The *symptoms* of appendicitis are these:—(1) Sudden pain all over the belly, getting worse and worse, and finally settling down to the right side of the lower part. The sick man lies on his back and draws his right leg up. (2) Loss of appetite, sickness, constipation. (3) Tenderness to the touch, especially at a point two-and-half inches from the bony prominence of the hip-bone in the direction of the navel. (Dr. McBurney's "Spot.") (4) Feverishness. (5) Swelling in the part referred to.

In an ordinary case these symptoms increase for a few days, then gradually subside and the disease gets well.

Treatment.—Very light milk diet, and rest in bed. Poultices or an ice-bag to the painful region. Do *not* give purgative medicines.

All cases must be seen by a doctor, who alone can tell whether they are going to be serious or not and whether an operation will be necessary or not.

Appetite, Good, Bad and Indifferent.—By appetite the medical man means the desire for food which every person possesses when in good health.

I.—A loss of appetite is one of the earliest signs of illness, and it usually continues so long as the patient is in any way seriously ill.

It is so pleasant a state to have a good appetite that patients will come to a doctor about a loss of appetite, without being in any other way ill. When this is the case the fact is generally that the person has been eating too often and too much, or, at any rate, more than his stomach can manage to make good use of. When too much food is taken, and too little work done, the whole system becomes overloaded with waste products, in excess of the quantity which the bowels can carry off, and the liver and kidneys become affected, and their whole work disorganized, and so the blood becomes impure. Loss of appetite is an advantage under such circumstances. *Many people boast of a large appetite who would live longer and feel better if they ate less.* Rich people, with good cooks, who eat heavy

late dinners, are rarely very robust for any long time together, and large numbers of them have to go abroad once a year to undergo a course of abstinence and mineral waters at some Spa or health resort.

Many old people are in perpetual suffering from nothing more irrational than having indulged a good appetite while they were young and reckless.

The old physicians knew this, and used to say that he who wants good health should care little about eating, and should leave the table before he feels quite satisfied. Among the poor, however, and in our towns, a loss of appetite is generally a sign of disease, which may be acute or chronic.

II.—All fevers and states of inflammation are ushered in by want of appetite, and most chronic states of ill-health produce the same state before they have existed for long. For example, phthisis, or consumption of the lungs, scrofula, and cancer. Serious acute illnesses often leave behind them a state of debility or weakness, which lasts for several weeks, and in this state also the appetite is often fastidious, and needs to be tempted.

III.—While loss of appetite is one of the most common symptoms of illness, doctors are also consulted by sick people who want to eat too much, and for some who do eat enormously.

An excessive appetite is a sign of disease in most cases, but we do also find it present in some persons who are not ill in any way. Some badly-managed children are very large eaters, and occasionally we see an adult man or woman gorging food; such persons are often weak in mind. Children with intestinal worms will sometimes be found to have an unnatural craving for food. In olden times doctors used to say that if a man had a tapeworm within him, he had to eat more than usual to feed the worm; but at the present day we should say that the tapeworm sets up an irritation in the coats of the intestine, which shows itself in a false sense of hunger.

Imbecile children will eat at all times, and will eat anything; even chalk, cinders, coal, and pencils in some cases.

The disease called diabetes, not uncommon in people at or beyond middle life, often gives rise to a voracious appetite. This disease is marked by the production of an enormous quantity of water from the kidneys, and this

urine is peculiar because it contains sugar dissolved in it. Many a diabetic person will consume one or even two pounds of rump steak at a meal without suffering from any indigestion. Navvies, coal miners, and others who work long hours at very laborious work, and get high wages, often have voracious appetites, and eat very large quantities of food, generally of a wholesome sort, however; but they eat more than they need, for it is a mistake to suppose that even the hardest laborer requires all the food a man can eat. The excess of food must be got rid of somehow, so the liver and kidneys are called upon to work in a dangerous, overloaded condition, and they frequently get damaged in consequence even before such men reach the age of 40, and in many cases these organs break down completely from over-strain, passing into states of disease which lead to an early death. The over-feeding of children is often the result of undue encouragement by the parents. A child is, perhaps, rather thin, and is, therefore, prompted to stuff, and so gets into the habit of over-eating. *In many such cases we have observed the child to get no plumper, and this is because it had not needed more food, but better powers of digestion,* and over-feeding led to further disorders rather than to improved nutrition.

Ascites.—Sometimes patients see this word on their hospital tickets. It means dropsy of the belly. The abdomen is full of, or contains, fluid, and may have to be tapped. It may be caused by disease of the liver, heart or kidneys. (*See "Dropsy."*)

Asthma.—This word is often used loosely to mean any kind of shortness of breath. It *should* only be used to refer to a spasmodic disorder of the air passages, neither acute nor chronic, but paroxysmal (occasional). It is liable to complicate chronic bronchitis, but it is an error to believe that all extra severe attacks of that complaint are connected with real asthma.

Shortness of the breath which is not spasmodic is usually caused by some organic disease of the lungs, heart, or kidneys and is best cared for by the sufferers' placing themselves, at the earliest possible moment, in the hands of a competent physician, who can determine the cause and direct the proper treatment.

A patient who is subject to asthma seems perfectly well before the attack and then is suddenly seized, often dur-

ing sleep, with the most violent breathlessness; feeling a tightness at the chest, he gasps for breath and grasps at near objects such as the bedpost to help him to breathe. The attack may last a few hours or a few days, and then suddenly pass off. One of the curious features of people who suffer from asthma is their tendency to skin eruptions.

The real and exact cause of the attacks is a spasmodic narrowing of the air-passages of the lungs, but what causes the spasm is very often not known. A nerve-troubled family history is generally found in people who have these attacks, and sometimes instead of an attack of asthma they will have one of gout, or neuralgia, or madness.

No doubt every lung disease predisposes a little to attacks of asthma, especially in gouty people. Some climates cause attacks, while others seem to do them good. But no doctor can safely prophesy what sort of climate will certainly suit a given case of asthma. If you have attacks where there are trees, go where there are none; if by the sea, then go inland.

It is pretty certain that attacks of indigestion cause attacks of asthma in those subject to them. So all asthmatics ought to avoid cheese, pickles, celery, sardines, pastry, porter, pork, and nuts. No late suppers should be taken on any account.

Between the attacks one can only try and live quietly and without much excitement. As to climate, the sick person, whether a child or an adult, should live, if possible, away from fogs, dust, and smoke. More than that cannot be said about the climate. Solid food should not be taken after four o'clock in the afternoon. Children are often asthmatic and do not "grow out" of the disease.

Iodide of sodium may be taken with advantage by most asthmatic people twice daily, in five-grain doses.

Before an attack, the sufferer may take lobelia or pyridine, but both drugs must be taken only under medical supervision. Milk is the only diet allowed during the attacks. As for inhaling the smoke of asthma-powders, it is a useful proceeding. White blotting paper, soaked in a saturated solution of nitrate of potash, and two or three strips of it burnt, and the vapor inhaled, is a simple remedy. Many people find instant relief by smoking stramonium or cubeb cigarettes.

The disease itself does not shorten life. People do not

18 BABIES LOST BY OVERLAYING IN BED

die in attacks of asthma. But if they occur too frequently, they increase the bronchitis which they too often accompany. Once in a while, a child grows out of the complaint, but adults never lose it altogether.

Babies Lost by Overlaying in Bed.—Is it not a very serious state of affairs that hundreds of babies are overlain in London and New York every year? And can nothing be done to make infant life more safe? The root of the matter lies in the old custom of the country—that of having an infant to sleep in the mother's arms, or at any rate, in her own bed, and with the father. Overlaying is practically unknown on the Continent of Europe, the reason being that it is a recognized custom for parents to obtain a cot as soon as a baby comes. The old-fashioned wooden box, cot, or cradle used to be handed down from one generation to another, and used for every baby as it came along. In Germany and some other countries, there was a strict law that no mother or nurse should have an infant under two years of age in bed with her, under a heavy penalty, and, if the law being broken resulted in a child's death, and an infant got suffocated in bed with a grown-up person, there was a conviction for manslaughter, and a long imprisonment followed.

In this country there are, of course, many cradles in use, especially in country districts, but in our cities and among the poor it is an almost invariable rule to find young infants in bed with both parents. We want to teach parents that the life of an infant under one year of age is never safe in bed with a mother; it is too feeble to breathe easily under any covering, and suffocation is bound to follow when an infant's mouth and nose get squeezed against a mother's breast, or if her arm rest upon or over them, or even if heavy bedclothes get pulled up over a child's head. Until baby is a year or more old it is seldom strong enough to rouse up a mother when it is dying; its struggles for fresh air are too feeble to awake a woman who sleeps soundly. In our towns women work hard and go to bed late; sleep like logs, many of them, for hours, in utter ignorance that the baby whom they love is dying beneath them. There is no medicine which can make mothers sleep lightly, and there are no means of avoiding overlain babies except by insisting on the use of a cradle. It is only reasonable to urge that the clergy should do their

best to get this reform carried out. There are, of course, numbers of babies overlaid because their mothers drink too much, but we feel quite sure that the number of such is small compared with the total number of babies who die suffocated in bed, overlaid by parents tired with the day's work.

There is no reason for the non-possession of a cot for the baby.

Backache.—Pain in the back is a very common ailment indeed, especially that form of it called by women "bearing-down pain." It is very often a sign of nothing more than tiredness of the muscles of the back; but, on the other hand, it may be a symptom of disease in some internal organ.

Under "LUMBAGO" you will find a full account of the pain due to rheumatic trouble in the back muscles, as well as several valuable ways of dealing with all kinds of back-aching. Backache in young growing persons may be due to general debility, and then keep an eye open for curvatures and weakness of the spine. Actual disease of the spine itself more often causes what is called "referred" pain in the front of the belly. Some kinds of kidney diseases (*see* "Kidney Diseases") cause backache. Gallstones cause backache especially on the right side and in the right shoulder. Ulcer of the stomach (*see* "Stomach Diseases") will often cause local pain in the back at the level of the last rib. But the commonest causes of women's backache are menstrual disorders, catarrhs of the womb, falling of the womb (due to getting up too soon after miscarriage or childbirth), inflammation of the womb, and tumors of every kind, connected with womb or ovaries.

Very little can be done towards curing the backache until we know what causes it. If a young man or woman has severe backache, that is not due to "growing pains," or general weakness, or curvature of the spine, let him or her save a sample of the urine which he or she passes first in the morning, and submit it to the doctor for analysis. Under "LUMBAGO" will be found plenty of "cures" for those whose backache is due to something that cannot be discovered, or cannot be treated, and we refer all sufferers to that article.

Baldness.—This may be permanent, as in old age, or temporary as after fevers, in debility, syphilis, and con-

sumption. Even those who are bald with increasing age need not despair, however, for so long as any hair-growing follicles are left in the skin they may be stimulated into activity. The hair requires plenty of brushing and washing about once a fortnight, or three weeks. The washing should be done in hot water, with a little household ammonia in it, and then some ordinary yellow soap should be used, or, better still, *egg julep* as a lather. When the scalp is clean, dry it and the hair by rubbing with rough towel.

A good hair-wash for the baldness following an illness is—Castor oil, 20 parts; tincture cinchona, 10 parts; tincture rosemary, 10 parts; tincture jaborandi, 10 parts; bay rum, 100 parts. Shake well and rub into scalp frequently.

Women who are weak and anæmic should try this lotion to prevent hair shedding:—Salicylic acid, 3 drachms; liquefied carbolic acid, 1 drachm; castor oil, 3 drachms; alcohol, q. s. to 6 ounces. Make a lotion. To be rubbed into scalp.

When the hair falls off because of scurfiness of the scalp, use this lotion:—Resorcin, 1 drachm; ether and castor oil, of each, 1 drachm; eau de cologne, one ounce; rectified spirits, 6 ounces. Mix.

If the scurf is very thick and very greasy, and the hair comes out by the roots, try this lotion:—Resorcin, 40 grains, ether and castor oil, 2 drachms; eau de cologne, half-ounce; bay rum, four ounces. Rub into the roots night and morning on clean rag, which is to be burnt immediately after use. (*See also "Skin Diseases" IV.*)

Banting.—"Doing Banting" means dieting one's self in a special way in order to get thin. Banting was the inventor of this particular method of reducing weight. In one year, Banting reduced his weight from 196 to 154 pounds.

The Banting diet is very scanty, but many very fat people adopt it with good results. Here is the dietary:—

Breakfast.—Six ounces of meat, any meat except pork or veal; one ounce of dry toast, or dry biscuit; 10 ounces (half-a-pint) of coffee or tea, without sugar. *Dinner* (five hours later).—Six ounces of meat (except pork, veal, eels, salmon or herring), or of any kind of poultry or game; six or eight ounces of any vegetable except potato, beetroot, turnip, carrot or parsnip; one ounce of dry toast; a plate

of cooked fruit, unsweetened; 10 ounces of claret and water. *Tea* (four hours later).—Three ounces of cooked fruit, unsweetened, with plain rusks; eight ounces of tea without milk or sugar. *Supper* (three hours later).—Four ounces of meat or fish, or game, or poultry, as at dinner; six ounces of claret, or claret and water.

This method of treating extreme fatness is deservedly popular, but for some people it may not be enough to keep up the strength. Such people should not try and eat *more*, but should adopt the Oertel method, which is similar, but has a higher proportion of fat and starchy foods, and is combined with regulated hill-climbing.

Barbers' Itch.—Hairdressers generally know enough about skin diseases to be aware that they sometimes help to spread contagious skin diseases by insufficient attention to the cleanliness of brushes and other utensils which they make use of in the ordinary course of business. One of these is called "barbers' itch." It may affect the eyebrows, eyelashes, mustache, beard, and armpits and groins. There are little tender pimples which form around the hairs, and develop into tiny abscesses (pustules), and the hairs come out easily. When the hairs are out the matter comes out too, and perhaps at once affects the next hair-sheath. The disease is most obstinate to cure. The hairs have to be pulled out and the matter has to be gently squeezed out of the follicles; after that you must rub in some antiseptic ointment, such as yellow oxide of mercury ointment, or 2 per cent. resorcin in vaseline or cacao butter.

Under the heading of "Hairdressers" we give some hints as to the prevention of such diseases.

Barley Water for Invalids.—**DIRECTIONS.**—Mix one dessert-spoonful of Robinson's Patent or Prepared Barley with a wineglassful of cold water into a smooth paste. Pour this into a stewpan containing one quart of boiling water, and stir over the fire for five minutes. Flavor with lemon and sugar, either or both, according to taste, allow the mixture to cool, and strain off the barley sediment. For invalids requiring nutriment, a large quantity of barley should be used and the straining of sediment omitted, or not, as directed by the doctor.

Barrenness.—The *treatment* of barrenness must obviously depend on the cause of it, and only a doctor can decide this point.

Bathing, The Importance of.—In order to maintain good health, it is of the utmost importance to keep the skin of the whole body clean. We may notice among persons whose habits we know of, that those who take daily baths are notable for health and for having a good color and clear complexion. We are constantly getting rid of used-up material through our skins by perspiration and by evaporation. The pores of the skin tend to become blocked up unless often washed, and when the pores are obstructed more work is thrown on the kidneys. Persons in robust health are all the better for having a daily bath of cold water; those who are less strong are wise to have a morning bath of warmed water. Such a practice is well worth the trouble of the process and the loss of time, and it should be followed in houses with conveniences for it. When a daily bath is not practicable, a warm bath should be taken once a week at bedtime, and during pleasant weather a bath in the sea, or in a river, or in a town swimming-bath, is very desirable. It is not desirable to remain in any bath very long, and on getting out the whole body should be rubbed with rough towels until the skin is all pink and glowing with warmth. When a person does not feel a hot glow after a cold bath, he should not bathe in quite cold water. It is only foolhardiness to risk taking cold baths in the open air during winter weather. Medical men describe and advise several sorts of baths. For instance, the *cold bath* generally means the use of water just at the temperature it happens to be according to the weather. Baths of warmed water require the use of a thermometer to regulate the heat to the degree ordered. In general domestic use, of course, it is customary to test the heat of the water by the hand; this, however, is an uncertain guide. Delicate children may easily be scalded by hot water which does not feel painful to a nurse's hand. A bath called by a doctor "tepid" means of heat between 84 and 92 degrees Fahrenheit scale. A warm bath is from 92 to 98 degrees; the latter is blood-heat. This feels hot to the whole body, and is most suitable for a general washing with soap. A hot bath is of a heat from 98 to 105; this is only to be used as a form of medical treatment. A mustard foot-bath is made with a half-teacupful of mustard powder to a gallon of hot water. An alkaline bath, used in skin disease, is made by adding carbonate of soda to warm water. A

sulphur bath, to cure itch, is made by adding two drachms of sulphurated potash to each gallon of water. Soak the affected hands and arms in it.

Bed Case.—This is an old-fashioned name for cases of hysteria of a certain kind. Instead of being up and about, doing their share of work in the world, the subjects of this pitiable condition prefer to be regarded as interesting invalids. They dislike being told that they look well. They like to believe, or to make their friends believe, that they have a mysterious internal complaint, and that their doctor considers them very interesting and obscure cases. They often are tranquil and cheerful, and have good digestions for dainty food. They always have some speciality in the way of a disease—always obscure and invisible. Either it is “something wrong with the spine,” or with the “womb,” or “the nerves,” and they say, in order to attract the sympathy which is as bread and cheese to their vain and little-minded selves, that they have “horrible pains.” If these patients can be brought into a healthier state of mind by cheerful companions, or nurses who will stand no nonsense, they may be cured. But, unfortunately, too many of them are quite comfortable in their selfishness and do not in the least desire to be made like other people, or deprived of their friends’ sympathy. (*See* “*Neurasthenia*” and “*Hysteria*.”)

Bedsore.—A bedsore is a sore or ulcer which forms on some part of a bed-ridden invalid, and it is due to pressure and moisture combined. The chief places are the heel, the buttocks and the bottom of the spine. A nurse should regard the formation of such a sore on her patient as a disgrace, generally, and due to her own carelessness or want of watchfulness. The sick person must be kept quite dry and unsoiled by sweat, discharges or urine. Look out for redness over parts which are lain upon, and rub them a little daily with methylated spirits, dry thoroughly and dust with some clean powder. If the skin once gives way, the ulcer is very difficult to heal, and the doctor’s attention must be called to it. Otherwise the sick person will have an additional trouble which ought to have been avoided. Bedsores occasionally occur in very old, paralyzed, and dying folks, but in most cases can be avoided by proper attention.

Beef Tea, How to Make.—(1) Cut up a pound of lean

gravy beef into small pieces, put them into a covered jar with two pints of cold water and a pinch of salt; put the jar on the hob, let it warm and simmer gradually for two hours, taking care it never reaches boiling point. Another method is:—(2) Chop fine a pound of lean beef, add a pint of cold water and leave for two hours. Then let it simmer on stove for three hours, but never let it get much hotter than 160° F. A thermometer will be wanted in nurseries where this method is made use of. Make up for the water lost by evaporation by adding cold water, so that a pint of beef tea shall represent a pound of beef. Strain, and carefully squeeze all fluid from the beef.—(Bartholow.) (3) Beef tea and oatmeal—a very nourishing meal:—Mix thoroughly a tablespoonful of groats with two tablespoonfuls of cold water and add to a pint of hot beef tea made as in (1). Heat up again for ten minutes, stirring all the time, and strain through a coarse sieve.

Beverages.—All “drinks” contain a large proportion of water, and, in fact, the daily drinking of a large amount of water is a necessity for health. An average adult needs water, in one form or another, to the extent of from 2½ to 4 pints a day. It should be filtered or boiled, or both. We shall now consider the principal beverages from a medical point of view:—

Tea and Coffee are much alike both in their composition and in their effects. They stimulate the system and are quite harmless, in moderation. *Cocoa*, on the other hand, is a true food.

Tea ought to be made with boiling water, and water as “soft” as possible. If your tap-water is hard, boil it for fifteen minutes with a pinch of carbonate of soda before you make the tea. Everybody knows the effects of tea-drinking. We need only say that green tea has much stronger effects than black. If tea gives rise to any sort of indigestion or palpitation of the heart, it may be because it has “stood too long.” In any case, tea ought to be drunk *after* a meal, and not *with* a meal, and a little carbonate of soda should be added to the pot. “High tea”—the meal consisting of tea and meat—is a fruitful cause of indigestion.

Coffee ought to be freshly roasted, and freshly ground in order to be at its best as a drink. Coffee in moderation stimulates the heart and lessens the sense of fatigue. Too

much coffee may depress the heart and make it irregular, and cause an uncomfortable feeling in the cardiac region; it may also cause heartburn and flushing of the face, especially when strong black coffee is drunk after a meal. It then delays digestion of the food. Strong coffee is a splendid antidote to poisoning by alcohol or opium. (*See "Poisoning."*)

Cocoa is a very nutritious food. It contains both body-building and energy-giving foods, and should be used instead of tea by the poor especially.

Chocolate is a very excellent and agreeable drink, containing a deal of fat and starchy material, and plenty of sugar. Bilious people should not drink it. It is a food rather than a beverage.

Alcohol is a useful food in very small quantities, an agreeable stimulant in larger quantities, and in excess is a powerful narcotic poison. A great authority says that one fluid ounce or one-and-a-half ounces of *absolute* alcohol in twenty-four hours is the most that any healthy adult can take with probable impunity. One ounce of pure alcohol is contained in about:—

| | |
|--------------------------|--|
| 2½ fluid ozs. of whisky. | Half-a-pint of claret. |
| 2 fluid ozs. of brandy. | Two pints of bitter beer. |
| 2 fluid ozs. of gin. | One-and-a-half pints of porter. |
| 1½ fluid ozs. of rum. | Two-and-a-half pints of lager beer. |
| 6 fluid ozs. of sherry. | Two pints of cider (varies very much). |

NOTE—*See also "Drachms" and "Ounces".*)

Birthmarks.—Blemishes at birth are of various kinds. The commonest, perhaps, are "port-wine stains" on the skin. These are purplish patches of fantastic shape, due to dilated blood vessels. Sometimes they increase in size as time goes on; more often they only increase slowly for a few months and then remain quite stationary. They can sometimes be improved by electrolysis, but more often not. Old wives tell tales about "strawberry-marks," and "mouse-marks," and say that they are the results of some of the mother's experiences during pregnancy; these notions are but silly superstitions. Other "mother's-marks" are hairy moles and colored moles, all called by doctors

nævi (*nævus* is the Latin for mole). These are more likely to be removable by electrolysis.

Bites and Stings of insects may be bathed with tincture of arnica, onion juice, thymol ointment, or dabbed with a piece of rag or cotton-wool soaked in ammonia solution. Cloudy household ammonia will do nicely. An insect bite must not be scratched or a sore may result from poisoning by dirty nails.

Bites of Dogs.—If an ordinary healthy dog bite a person, there is no need to fear hydrophobia. Not all dogs which bite are “mad dogs.” In fact, “madness” in dogs means the rare disease called *rabies*. There is a very curious, but entirely nonsensical, superstition that if a mad dog which has bitten someone is shot afterwards the sufferer will be saved. *Rabies* in the later stages is easy to recognize; the poor animal who suffers from it lies ill, curled up in a corner, with foamy mouth and hanging tongue, and is more or less paralyzed. In the earlier stages of this “madness,” the dog is sulky, suspicious, and snappish, and may, perhaps, run after anyone who annoys it, and bite him. But even when bitten by a “mad dog” a person need not develop hydrophobia. The poison in the dog’s saliva will probably have been wiped off in the clothes through which it bites.

For the same reason mad-dog bites of the hands are dangerous and those of the face especially so on account of the great blood supply.

As hydrophobia, once developed, is almost always fatal, the first thing to do is to cauterize the bite. Only a surgeon can do it properly, but anyone with the necessary hardy courage could burn out the wound with a cautery, such as is used for fancy poker-work, or a red hot poker, or a pair of lady’s curling-irons.

The disease is comparatively rare. Still, every bite of a dog ought to be seen to by a medical man.

Hydrophobia may develop a few days after the bite, but in many cases there is an interval of weeks or months.

When bitten by a dog it is most important to establish the fact whether the animal is rabid or not. This may be done by one of two methods. 1st—Keep the dog alive, under observation. 2nd—Kill the dog, cut its head off and forward, as quickly as possible, packed in ice to some health department laboratory where a diagnosis can im-

mediately be made by a microscopical examination of the brain. *By no means* let the dog escape, or be killed and lost sight of.

If, in either case, the dog is proved to have rabies, the subject bitten must begin immediately the Pasteur treatment:—either at a department of health, a Pasteur Institute, or as can now be done, by his own physician at his own home.

All public spirited citizens should appreciate the fact that rabies, which is becoming very common in this country, can never be blotted out until widespread muzzling of dogs is carried out—at least for a limited period followed by a permanent national quarantine—such as enforced in England, where rabies is now an unknown disease.

Black-Eye.—A purple discoloration of the skin of the eyelids, cheek, and perhaps forehead, due to a blow, or fall; the color results from blood being effused under the skin from veins bruised by the violence. Very severe blows may have injured the bone deeper still. The whites of the eyes may also be stained crimson or purple. A black-eye will gradually get well if left alone, but it is a good plan to apply cold lotions of spirit and water, or vinegar and water, or a piece of raw steak, if attended to at once; if the case be found painful at a later stage apply warm poultices, or fomentations of poppyheads. The dark color will fade away, becoming red and then yellow before the skin becomes white again. In the final stage rub the part gently with white vaseline, lanolin or cold cream. If the skin is broken as well as bruised, treat the case with fomentations of boric lotion, followed by zinc ointment.

Blackheads.—There are comparatively few young people whose skins are entirely free from “blackheads.” They show as little black pimples on the skin of the nose or forehead or chin; but also on the shoulders, back, and chest. They look a little like grains of gunpowder embedded in the skin. If they are squeezed out between the finger nails, or with the barrel of a small key, they look like little white curly maggots with black heads. Sometimes the little plugs are more like tiny orange pips. They are quite harmless, but they disfigure the face very much, and they may, and often do, become acne spots (*see* “Acne”). They ought to be squeezed out, but gently,

28 BLEEDING FROM VARICOSE VEINS

because if it is roughly done, there is *sure* to be an acne spot formed there, and then the skin must be washed vigorously with soft soap and hot water and dried with a rough towel. This ought to be done at bedtime, and then the following paste must be rubbed in:—Glycerine, six drachms; kaolin, one ounce; and vinegar, half-an-ounce.

Bladder, Diseases of.—There are two “bladders” in the human body—the gall bladder in the liver, and the urinary bladder, to which the urine passes as it comes from the kidneys until the bladder gets uncomfortably full. Inflammation of the urinary bladder is called cystitis.

1.—The signs of *cystitis* are:—Pain in center of lowest part of the belly; too great frequency in passing water; bad smell, turbidity, and whitish sediment in the urine; feverishness; shivering fits.

Treatment of acute cystitis.—Rest in bed, hot hip baths, milk diet, plenty of water to drink, and *urotropin* (5 grains) to be taken three times a day. This is the treatment of an attack of cystitis caused by catching cold. But cystitis, and pain and bloody urine, may be due to a stone in the bladder, or to other things, and then the disease requires very skilled treatment. Other diseases of the bladder are irritability, tumors, and rupture (nothing to do with “hernia”).

II.—*Irritability of the bladder* (with very frequent desire to pass water) may be caused by cystitis, stone, stricture, enlarged prostate gland, gouty acidity of the urine, piles, too tight foreskin, etc. The treatment, of course, depends on the cause, which only a doctor can decide.

Bleeding from Varicose Veins.—In persons who suffer from varicose veins the skin of the parts affected at length becomes brownish, shiny, and so badly nourished that the very slightest injury may give rise to a troublesome sore. The sore does not heal because the parts are so badly supplied with blood, and the ulcer (*see* under “Ulcers”—6) may penetrate to one of the swollen veins under it and give rise to a sudden copious loss of blood. In a few seconds the sufferer may lose blood enough to cause a serious fainting fit, which arrests the bleeding for a short time. If you ever see anyone bleeding furiously from a sore on the leg where there are knotted and swollen veins, make him lie down on his back, raise the leg, and apply pressure

with a handkerchief rolled into a pad, *directly on to the bleeding spot* and bandage it tightly there, or bandage *both* above and below the wound. Then send for a doctor.

BLEEDING from the back passage, or rectum, generally shows the presence of piles, or ulceration, or inflammation of the bowels. A small occasional loss of blood in a full-blooded person is rather a good thing, but in all cases a doctor should be told about it, as it may be curable, or it may be the sign of a disease elsewhere which ought to be medically treated.

BLEEDING from the nose. (See "Nose-bleeding.")

BLEEDING WOUNDS.—When a cut is received on fingers or arms the wound should first be thoroughly cleaned with water and peroxide of hydrogen or bichloride of mercury solution (1-1000). Then pressure should be applied—preferably with sterile gauze and a firm bandage applied. If the cut has been a severe one this may have to be followed by attention from a physician to tie off the bleeding points and perhaps sew up the wound. All wounds of the face, when small ones, should be sewed up by a physician, otherwise the numerous muscles of that part of the body will cause the wound to gape and leave an ugly scar.

If the bleeding from a wound can not be controlled by direct pressure a tourniquet should be applied with pressure over the main artery of the extremity some place on the heart side of the wound.

Blisters.—A blister is a watery bleb of the skin. It may be caused on the hands by rowing, or other exercise, and on the feet by too much walking. A burn may cause a blister, so may a bruise, or a scald, or an attack of erysipelas.

For feet inclined to blister, bathe daily with a lotion of alum and 10 per cent. chromic acid (poison), or smear the inside of the socks with dry soap. For actual blisters, prick them with a clean needle, let the fluid out, and put on a piece of soap-plaster or other clean dressing. For small blisters, leave them alone; if inflamed, apply zinc ointment or show them to the doctor. If the blister has not been caused by any ordinary event, it may be a symptom of a skin disease, and skilled advice must be obtained.

Blistering may be produced artificially by certain plasters; or by blistering fluid, for the purpose of curing pain or

bringing down inflammation. A blister should never be put on without medical advice.

Blood-Spitting.—This means coughing up blood, and blood can only be “coughed” up from the windpipe or the lungs. Sometimes an aneurism (*see* “Aneurism”) bursts into the air passages, but in all other cases blood from the lungs means lung disease more or less serious. The coughing up of blood is accompanied by a *tickling* sensation in the throat, and the patient goes on coughing up blood for some little time; the blood is *generally* scarlet, and mixed with air-bubbles. The commonest cause of blood-spitting is tuberculous disease of the lung; then comes congestion of the lung from chronic heart disease; then acute pneumonia and bronchitis; then disease of the voice box; then an aneurism; and the most unusual cause is from constitutional disorders, such as scurvy.

When a patient begins to spit blood in small quantity put him to bed and give him pieces of ice to suck, or sips of cold water. If he spits or coughs up a large quantity, keep him lying down with his head on a low pillow, and try to keep your own presence of mind, and cheer him up until the doctor comes. It is all that you can do.

Blood-Vomiting.—The first thing to find out is whether the blood that is vomited comes from the stomach or not. A man may bleed from his lung, or from the back of his nose, and the blood may be swallowed and afterwards vomited. So be sure to notice particularly all the characters of the blood and of the vomiting. Tell the doctor if the blood is bright red, or dark red, if it comes into the handkerchief when the nose is blown, and whether the gums are sore or not. Blood is dark red and clotted if it comes from the stomach, and light red and frothy if it comes from the lungs. The more accurately you can describe to the doctor all the details of vomiting, and its relation to food and drink, the more accurate is his advice likely to be, and the more speedily he will be able to begin the necessary treatment. Until the doctor comes, keep the patient in a lying-down position and let him suck small lumps of ice.

Boils.—The appearance of boils usually indicates a “run down” condition. Under these conditions the tendency to the occurrence of boils is increased by excessive use of tobacco and alcoholic drinks or constipation. They are

exceedingly common in people suffering from diabetes.

A boil is an abscess of the skin—a red, painful, inflamed lump, which when “ripe” is full of matter called pus, and contains a “core,” which is made of dead tissue, and must be got rid of before the inflammation will heal.

A boil may sometimes be aborted by the following procedures:—Take a cathartic (calomel followed by laxative salts), scrub the inflamed area with soap and hot water, pull out any hairs near the central area and apply gauze soaked in bichloride of mercury (1-000 in 50% alcohol). Stop smoking and drinking. Further aid may be obtained by the inoculation of a vaccine (against suppuration) by a physician.

If the boil comes to a head it must be opened by a physician, cleaned out and drained. Afterward it may be necessary to take sulphide of calcium (gr. 1/10) and a tonic of iron and arsenic with a course of vaccine treatment.

Brandy and Egg Mixture (EGG-NOGG).—Mix together the yolks of two eggs, half-an-ounce of refined sugar, two ounces of good cognac and four ounces of cinnamon water.

Breast, Abscess of (“MILK-ABSCESS”).—*Causes.*—Abscess of the breast rarely occurs except during suckling. A cracked nipple is generally the path through which the germs of inflammation get into the breast itself; and they are able to set up inflammation there because the breast is neglected and gets too full of milk, owing to the fact, that the nipple being sore, the baby is put too much to the other breast. This is very bad for the baby, who is drawing his very life from the other breast.

Treatment.—Whenever, because of cracked nipple, or for any other reason, a baby does not make use of one breast, it must be regularly emptied by a breast pump, such as all druggists sell. If inflammation is beginning and some part of the breast is getting hard and tender, let the woman purge herself well, foment the breast every two or three hours, and support the breast with bandages or a sling passed round the neck and under the gland. But if an abscess seems to be forming, let the doctor see it without delay, for an early incision will often save weeks of pain and illness and avoid the formation of a foul and troublesome ulcer.

Breath, Unpleasant or Foul.—This may be the result of unhealthiness of the stomach or of the mouth and teeth. The breath of a person whose digestion is good, and who keeps the teeth clean is quite free from anything objectionable. It is useless to try and cure unpleasant breath with cachous or scented lozenges, so long as the food is not masticated properly; or if too much alcohol is drunk, too much smoking or snuff-taking is indulged in, and the teeth are not brushed regularly every night at bedtime. (*See* the article on “Indigestion” and “Teeth.”)

BREATH, SHORTNESS OF.—This may occur only after exertion, such as climbing the stairs, or it may be always present. Shortness of breath may be spasmodic (*see* “Asthma,”) or continuous, which would be a sign of heart disease or advanced lung disease, or chronic bronchitis. Shortness of breath on exertion in young girls is generally due to *anæmia* (which *see*), or to heart disease caused by rheumatism. In older people, shortness of breath on exertion is more likely to be due to a “fatty heart” (perhaps one of the results of tippling), or to a weak flabby heart (after Influenza), or to chronic bronchitis. In the last case, sulphuric ether taken internally in small doses will give relief.

The reader will understand that there is no royal cure for shortness of breath itself. We must first discover what it is caused by, and treat *that* condition appropriately. But there are very few cases of shortness of breath which a doctor cannot greatly relieve. The shortness of breath which occurs in young girls is very amenable to treatment and such cases should never be neglected.

Bright's Disease.—Acute Bright's disease is an ailment in which the kidneys are inflamed, the urine scanty, the eyelids swollen, and albumin is passed in the water. It must be treated by a doctor. (*See* “Kidney Disease.”)

Broken Bones.—If, after any injury, a bone is thought to be broken, a doctor can not be seen too quickly. It is much easier to replace broken bones soon after the accident than later. When a bone is broken there is pain at the site of the fracture with swelling, tenderness on pressure, and inability to use the part. If only one bone of the lower arm or leg is broken the other bone, acting as a splint, may prevent complete loss of use.

After a simple fracture, a splint of a thin piece of board,

covered with cotton, should be applied and bound firmly with a bandage.

If the broken end of the bone protrudes through the skin (compound fracture) do not try to put it back in place before the doctor arrives as it has been infected and unusual precautions are required to prevent the formation of suppuration and an abscess.

Diagnosis of broken bones is nowadays practically always confirmed by the X-rays.

By this means also it can be determined whether the broken ends have been replaced in the proper position.

If there is one form of illness for which Christian Science is not fitted to treat it is broken bones.

Broken bones require from three to six weeks to heal, depending upon the size of the bone and the age of the subject. Some fractures in old people, as that of the neck of the femur at the hip, heal only with the greatest difficulty.

Voluntary motion of the muscles of a fractured part must be begun as soon as possible, otherwise they rapidly shrink from disuse and it may take a long time to recover the use of the part.

Bronchitis.—This means inflammation of the air tubes in the lungs (*see* also “Lung Diseases”). It is a catarrh of the air tubes just as a cold in the head is a catarrh of the nose and throat (*see* also “Cold in the Head”). It affects persons of all ages, from infancy to old age. Its chief symptom is a *cough* (*see* also “Coughs”). When the disease is acute, the sufferer has much fever and general illness, but the cough is the chief feature. At first it is hard, and no phlegm is coughed up, but later it becomes easier and the patient spits up a lot of yellowish thick phlegm, sometimes tinged with blood.

Acute bronchitis may be fatal, and must be treated by a doctor. Chronic bronchitis, in its various forms, such as a “winter cough,” is more or less easy to relieve, but very difficult, and often impossible, to cure. The patient ought to live in a dry climate, or failing that, a warm one. He must dress warmly and keep his skin active with frequent baths, and his bowels always well open. There are three different types (among others) of persons with chronic bronchitis.

(1)—One type has a dry catarrh, a painful difficult

cough and thick, sticky phlegm, which is very hard to get rid of. For such a case as this we recommend:—Sodium iodide, one drachm; sodium bi-carbonate, four drachms; chloride of ammonium, two drachms; solution of morphine, one drachm; chloroform water, eight ounces. Take a teaspoonful three times a day.

(2)—A second type is one in whom there is a lot of coughing, not painful, but noisy, and plenty of watery phlegm. Such persons would be benefited by:—Tar water (1 in 10), a wineglassful of half-a-pint, twice or three times a day. Sulphur lozenges and Cod-liver oil are also useful in such cases.

(3)—The third type is the bronchitic *aged* person—old and feeble, and wheezy. A good remedy consists of syrup of tolu, half ounce; ammoniacal mixture 2 ounces; compound tincture of camphor 3 drachms; and water up to 6 ounces. A tablespoonful may be given thrice daily, or every four hours. Petroleum Emulsion is also an excellent remedy given after meals.

It must always be borne in mind that a long continued cough which is difficult to cure is one of the first signs of tuberculosis or consumption. Therefore, if a cough has been impossible to cure after three or four weeks, a physician should be consulted to make sure that tuberculosis is not developing. The greatest hope for cures in consumptives lies with those who recognize their condition the earliest.

Prevention.—Much can now be done to prevent the occurrence of bronchitis and colds and consequently tuberculosis in the following way:—

Avoid the inhalation of dust. Keep up the resistance of the body to germ invasion by cold morning baths, out of door exercise, nutritious diet without excess of alcohol and tobacco and avoidance of undue fatigue.

Bruises.—If a bruise is accompanied by breaking of the skin it should be cleaned with peroxide of hydrogen and dressed aseptically until the skin has healed.

If the skin is not broken it may be rubbed with any healing, soothing lotion—such as belladonna liniment—the most efficacious thing being the massage which removes the extravasated blood and lymph and thus diminishes the swelling and consequent pain.

Bubo.—(See “Glands.”) A bubo is a swollen gland.

The word is generally applied to the glands in the groin, swollen as a complication of venereal disease. The treatment is surgical, and requires skill and a careful use of disinfectants.

Bunion.—This is the inflammatory swelling which takes place on the ball of the great toe of a person who wears ill-shaped boots. Good boots are straight on the inner edge and not cut to a point. The remedy lies in buying better-made boots. A bad bunion may require a little operation called “excision of the joint.”

Burns.—It is quite evident that burns of the body may be of every possible variety as regards extent and depth. If a hot cinder falls on one's flesh it may burn a deep hole; if one's clothes catch fire, there may result a very extensive burning of the skin only, and the fat and muscles beneath may not be damaged. There is always a certain amount of “shock” to the nervous system after a burn, and the greater the surface burned the greater will be the shock. A hot coal burning a hole in the flesh will not shock the patient so greatly as a surface burn of any part of the body.

In the case of a small burn, we have only to think about the burn, and how to get it well. We shall consider this first. There are two things necessary to know:—First, how to keep the burned part clean and free from germs of disease, which are generally floating about in the air, and are on the hands and clothes of everybody in cities and towns; and, second, how to relieve the dreadful pain and smarting, and to keep the raw place free from all mechanical irritation.

First, then, remember, that flesh or skin which has just been burned is already probably quite free from “germs,” or, as doctors say, “aseptic,” because fire is the destroyer of disease germs. So that it is our duty to see that nothing that can possibly be contaminated goes anywhere near the burn. Rags, oil, flour, etc., are all very well, but they may not be “clean” in a medicinal sense. Every household ought to have a little packet of pure boric acid powder in the cupboard, and this should be dusted over the burn. Blisters should be pricked with a darning needle, whose point has been held in a flame for half a minute, and the fluid allowed to trickle away or mopped up with medicated cotton-wool. Then over the powdered place you may

put a layer of medicated cotton-wool or a piece of boric lint. In any case, if you are going to treat the burn yourself, wash your hands and brush the nails with 5 per cent. carbolic soap before you begin. Then, even if the burn does not heal properly and there is a lot of scarring, you feel that you have done your best. With regard to scarring, do not forget that a burn on the face or hands, or neck, may result in contraction of the skin, which may disfigure the patient and spoil his looks for life.

For anything but a trivial burn, a doctor must be called in. No one else can apply really suitable treatment in any given case, especially if medicines are required in addition. Some like oily applications for burns, and use carron oil, composed of equal parts of linseed oil and lime water.

The alkali which the carron oil contains neutralizes the acid from the burn and thus prevents the pain which results when acid is applied to exposed nerves.

Some physicians, instead of using oil, prefer to expose burns to the air, neutralizing the acid with a solution of sodium bicarbonate. This is undoubtedly preferable for large surface burns where the oxidizing function of the skin must be aided—not interfered with.

Bust Development.—Doctors are constantly being asked by their lady patients for some unobjectionable method of developing their figures. That being so, and seeing that there are numbers of expensive preparations advertised for this purpose on the market, we give our readers a few hints. Undeveloped figures are generally a sign of poor nourishment, and the first thing to do is to eat only the most nourishing food and attend to the digestion and the state of the teeth. Eat porridge, plenty of bread and cheese, and eggs, and milk, and puddings, and avoid pickles and nuts, and too much meat. *Breathing exercises* are of the first importance. Every morning, before breakfast, throw open the window, have no tight bands or belts, or braces on, stand erect with heels together and shoulders thrown back, and fill the lungs with fresh air, *slowly*, to their utmost extent. When full of air, hold it in as long as you can, and then breathe it *slowly* out again. At first it will tire you, but persevere. Do it fifteen times, then lie down quite still and rest; then fifteen times again, then continue dressing. After three weeks your lung capacity will be much improved and then you may begin to fatten

and nourish the skin of the neck, shoulder and breasts. This is done by rubbing in the following preparation for five minutes night and morning; rub gently and firmly, and in a circular direction, with the palm of the hand:—Elderflower water, half-a-pint; simple tincture of benzoin, half-an-ounce; tincture of myrrh, a few drops; mix well and add best linseed oil, half-a-pint.

The intelligent reader will understand that all such methods as the above are, though often highly satisfactory, of much less real value than courses of suitable gymnastics would be. It is better to be in good *muscular* condition on the chest and elsewhere, than to be merely fat, because fatness varies with the time of the year and state of the health; and a woman with suitably-developed muscles seldom lacks a comely natural covering of fat and a healthy and rosy skin in addition.

Cancer.—It seems to be a fact that there is an ever increasing mortality from cancer in every part of the civilized world. The word “cancer” is used in a very vague way, almost as if it could be considered interchangeable or synonymous with “tumor.” Every cancer is a tumor, but very few tumors are cancers. “Tumor” means a swelling, and nothing more than that. There are at fewest ten different kinds of cancer, and they vary in course, in origin, and in causation. One of the commonest kinds of cancer, especially in males, is Epithelioma, which is always caused by mechanical friction of a part in a predisposed person, and is nearly always preceded by an ulcer of that part, caused very often by excess of alcohol or tobacco. Scirrhus cancer is the form which women generally have, and most often in the breast, as the indirect result of a blow or anything else which may hinder the proper performance of the functions of that organ. Only 10 or 11 per cent. of women affected can really trace the tumor from a blow, or some other mechanical violence. And then there is a group of fatal tumors called cancers by the public, but which are called Sarcomas by the doctors. Sarcomas are different from cancers in some important ways, but resemble cancers in that, if not removed in time, they will kill the patient. A malignant growth, whether Epithelioma, Carcinoma, Scirrhus, Sarcoma, or any other kind, kills the patient by exhausting his strength, and the only treatment is to have it removed by operation,

or burnt away by strong caustics. Even then it may come back again in another place, and if the other place is one which we cannot get at by the knife, of course we cannot remove the tumor, and the patient must die. It is now believed that cancer cells, in small collections, exist in many people from birth; and that the tendency for them to grow into tumors is hereditary. Not everybody who has a few cancer cells in his body has cancer, however—a tumor may never develop. As to the *real immediate* causes of cancer we know almost nothing. In a predisposed person, long-continued mechanical friction, or any other kind of mechanical injury will, perhaps, make a cancer form; and any old lump, or tumor, or sore, may become cancerous, if it is irritated long enough. If there is cancer in your family, you should *guard* against neglecting bruises, blows, sores, or inflammations of every kind; and you should, *to be quite on the safe side*, drink no alcohol and smoke no tobacco. It cannot be shown conclusively that cancer has anything to do with food, soil, or climate.

Prevention:—A large proportion of the deaths by cancer could be avoided if the cancerous condition were recognized early enough and removed soon enough. Therefore the moment a suspicious lump is observed in the breast, a sore on the lip which will not heal, indigestion which will not improve, or if there are evidences of blood from the uterus which cannot be explained by normal processes lose no time in seeking medical advice to get a diagnosis.

Pain is one of the most common symptoms in cancer, but do not rely on this symptom alone in making a diagnosis of cancer for it is sometimes absent.

Do not try to temporize with X-ray and blue light cures.

You may be losing invaluable time. See a doctor as soon as possible.

Carbuncle.—This is a large boil, affecting several glands in a group. (*See also* “Glands.”) The inflammation is more severe, the pain is greater, and there is more general illness than with ordinary boils. The seat of the trouble—the skin of the affected part—is raised, firm, bright, red and hot. In most cases the inflammation does not improve but gets worse for about ten days, and becomes a brawny red painful swelling, on the back of the neck, or elsewhere. Then it softens, becomes dotted with “heads”

or yellow points, and at each point the skin gives way and yellow blood-stained pus comes out. The carbuncle may even then continue to get larger. The skin between the holes dies and sloughs, so that there is a "core," and a ragged foul ulcer. The nearest glands are swollen and tender also, and the patient has shivering, aching, fever, and general illness. Death may occur from blood poisoning.

It occurs sometimes in persons of robust health, because it is due to poisoning by germs, but weakly people are more liable to be attacked. Many cases end in death from exhaustion, especially if they have diabetes as well.

The *treatment* of a small carbuncle is the same as for a boil. (See "Boils.") Paint the surface of the skin with glycerin of belladonna, and apply hot compresses. The surgeon must be called in, and he will make a cross-shaped opening with his knife, and let out as much of the poison as possible. The cavity will have to be scraped and mopped out with strong germicides.

But besides the local treatment, the patient himself—it is generally a man—will require treatment. He must have, if he is to recover, a liberal diet, and a strong tonic, suited to his age and state of health. Until after the slough has been cleared out, he ought to avoid stimulants, but port wine or champagne may be required in the after-treatment.

Afterwards a change of air and a rest are most necessary.

Cataract.—(See "Eye Diseases.") If you read the first paragraph on eye diseases you will know what the *lens* is. A *cataract* is an opaque spot on the lens of the eye. It is commonest in persons over fifty as one of the forms of the decay of age. Cataracts in young persons are generally the result of injuries to the eye.

Many cataracts can be removed by skillful eye surgeons, with restoration of sight.

Catarrh.—(See "Cold in the Head.")

Catheter.—A catheter is a tube for passing into the bladder to draw off the urine. No one but a doctor can use the instrument properly, but sometimes patients have to be taught to pass it on themselves, because they are unable to pass their water in the natural way. We give here full medical directions as to how to treat a catheter, which has to be used daily by the patient himself. We may remark

that a few persons regularly use a catheter *without* taking any precautions whatever, but sooner or later such behavior is always disastrous. An unclean catheter takes germs from the outside air into the bladder, and sets up inflammation there, which may be fatal.

A man who has to use a catheter regularly should use a red rubber one generally, and a gum-elastic one *only* when absolutely necessary. The smallest roughness or fraying of the catheter should cause it to be discarded. Have a bottle of a pint of 1 in 2,000 corrosive sublimate lotion; it is quite cheap and the drug is sold in tabloid form. Wash the hands with carbolic soap before handling the catheter, and the privates also, whenever practicable, before pushing the catheter into the bladder. Let the catheter lie in the lotion for five minutes before use, and then lubricate it with 1 in 40 carbolic oil. It is a good plan to squirt some lotion through the catheter (with a glass syringe kept for the purpose) before introducing it.

After use, the catheter ought to be washed with soap and water, and lotion run through it. Then roll it in a piece of boric lint and keep it in clean paper until wanted again. If these precautions are taken, a man may go on using the catheter daily for years without risk. If such precautions are neglected, the patient may at any time contract a catarrh of the bladder or something even more serious.

Chancre.—This word means a sore, caused by the poison of a venereal disease. There are two types of chancre, the *soft* and the *hard*. The soft sore is a local disease, it develops from a pimple which appears within a few hours and gets well, if properly treated, in a few weeks. But the glands in the groin may enlarge and become an abscess called a *bubo*. This disease is curable, and no ill-effects are transmitted to the children. But it is intensely contagious. The *hard sore*, on the other hand, is nothing more nor less than the first stage of the dreadful disease called syphilis (which *see*). This sore develops in from two to three weeks. The disease lasts for two years at least, and can be transmitted to the innocent children of marriage, as well as to the wife.

Upon the development of such a chancre the man or woman must immediately place him- or herself under good medical advice. They not only owe it to themselves to get well, but it should be their greatest concern that they

do not further spread the disease. This might be done by direct contact of the parts or later, through other disease conditions in the mouth, through common drinking cups and eating utensils.

The best way to avoid the inconvenience and agony of this disease is by not contracting it; and the best way to avoid contracting it is by leading a clean moral life.

To try to treat a disease like chancre or syphilis by Christian Science is one of the greatest crimes of modern times.

Change of Air.—Nowadays we all say we want a change of air and a holiday occasionally, but our grandfathers tell us that they did not want, and did not get, trips to the seaside, nor holidays from Saturday to Monday, nor any long autumn vacation, but they kept on at the same work year after year. What is the reason for this change? Are we less vigorous than our forefathers? Or do we work harder and have more worries than they did? There are reformers who tell us that we are a degenerate race, and there seems much evidence in favor of that view; and there is an easy explanation offered for our acceptance. Modern improvements in medicine and surgery have saved thousands of invalid lives during the last fifty years, and these thousands of unhealthy persons have had families, and their children are more or less tainted by heredity of scrofula, tubercle, or some other form of blood-poisoning. Whatever may be the cause, we moderns do really need rest and change very frequently, and it is wise to consider how to get the best effect out of our opportunities. It is quite certain that persons of ample means who can go away for a month to a health resort or to a seaside village, or who can go for a sea voyage under comfortable circumstances, will derive great benefit therefrom. It is, however, quite a different matter for the poor worker, who has to stint himself in his ordinary mode of life in order to get away from his home at all. Most of us love pleasure and change for their own sake, and we are apt to take them without much concern as to whether we shall really benefit in health. The average man is very apt to overdo his pleasures when he gets out of harness, and may certainly drink too much when on a holiday. Our railways offer us very tempting short excursions, but we are apt to find ourselves tired and exhausted after a long

railway journey in a crowded railway train. Persons who do not travel often in trains frequently catch severe colds when the weather is unfavorable; and the seaside lodgings to which the middle class and poor traveler have to go are often small, poky, dirty, and badly ventilated, and landladies frequently prepare meals less carefully than the housewife does for her family at home. The unfortunate result is that a holiday away from home does not always do all the good that is expected of it.

Change of Air as a Remedy.—Apart from drugs, there is no remedy of greater service to the invalid, the convalescent, and delicate person, than change of air. Change of scene and occupation are also valuable in the treatment of many minor ailments. For almost all complaints a change to the seaside is likely to produce improvement, if adopted after the disappearance of all acute symptoms. Sea air is more full of ozone, and is slightly saline, and is notable for improving the appetite and for giving tone to the nervous system. To the town dweller, and especially to those who have to work long days in factories and close rooms, the fresh sea air is life-giving; and even a few hours of life on the seacoast blows all impure air out of the lungs, and so does much to purify the blood. The pure air of the countryside inland, far from towns and factories, is often of almost equal value as a tonic remedy to one who is recovering from an exhausting illness. There are also thousands of persons who are of a scrofulous or tuberculous constitution, and children with rickets, who are hardly able to survive in towns. These will often grow up stronger, and even hardy, if removed to country villages or to the seaside. Country-born and bred persons are always superior in vitality to town dwellers, and this is one reason why it is such a national misfortune that the present-day tendency is for the young to desert country life and open-air occupations in favor of the town employments, which are never so healthy or free from risk. Town dwellers, accustomed to narrow streets and courts, often have a notion that they would be more liable to illnesses from catching cold; but this is a mistaken idea, for open-air life for a month renders persons much less liable to catch chills than they ever were before. The winds from open fields are much less dangerous than the draughts of air met with at street corners in towns. Persons who

in London catch a cold if they, for an exception, ride outside an omnibus, will not be made ill by a long ride on a coach among the Welsh or Scotch hills, because the air is purer and freer from germs. Delicate children should always be sent away from town for a long visit to country relatives, whenever it is possible, and quick recoveries will often be found to occur after whooping cough, diphtheria, enlarged glands and rickets, if treated by a three to six months' country residence.

Change of Life.—(MENOPAUSE, CLIMACTERIC, THE CHANGE.)—This is the time of life in a woman when she ceases to menstruate (*see* "Menstruation"), and, as a rule, becomes incapable of bearing children. This change occurs between the ages of 45 and 50, and sometimes comes on abruptly and suddenly, but in other women it is more gradual and sometimes accompanied by great loss of blood.

This change of life is a very critical period in the life of every woman. Every part of her seems to share in the general disturbance. Her bodily organs are all more likely than ever to become disordered, and hardly any woman escapes some ill-health at this time. Headaches, flushings, giddiness, and loss of blood are common. Great irritability of temper, over-sensitiveness, fancifulness, wrong-headed suspiciousness, unseemly behavior and coarse conversation, all these are characteristic of even the most amiable and respected women at their change of life.

If any germs of disease exist in a woman, they will often develop at a fearful rate at "the change," and women ought not to neglect to take medical advice at that time. It is impossible to map out any line of treatment for a condition which varies so greatly in different women, but it is always a safe rule to keep the bowels and skin acting very freely and to avoid excitement and late hours, and especially to avoid alcoholic drinks.

It should be borne in mind by all husbands, and, in fact, by all adults, that a woman, heretofore reasonable, amiable, lovable, and just, may, at the change of life, become temporarily ill-tempered, unreasonable, wildly and absurdly jealous, and unjust; these things are to some extent beyond her control, and she must be treated with the patience and forbearance which are shown to invalids and children. A "sweet reasonableness" must not be expected of her,

though she is unable, in many cases, to see that there is anything unusual in herself.

Chest, Deformities of.—A healthy chest is well-rounded in every way; it is covered with a fair layer of skin fat and no bony points project; the shoulder blades lie against the back of it and are covered with firm muscle. The grooves between the ribs can hardly be seen. In section such a chest is oval, slightly flattened behind. Such is the healthy chest containing healthy lungs and a strong heart. If the chest has a shape different to that, it may, perhaps, still contain healthy lungs, but those lungs are very liable to disease. The different kinds of deformed chests are these:—

Flat Chest.—This is either due to undevelopment or to lung disease. The chest is flat instead of rounded, the ribs are too straight and there is not much room inside for the lungs to expand. Such a chest may be greatly improved by the regular use of a “developer.”

Pigeon-breast.—The cross-section of such a chest is triangular, the breast bone forming a sort of keel in front, as it does in the breast of a pigeon. The ribs are flattened to the sides. The cause of this deformity is some obstruction to breathing in infancy, so that the lungs have not been properly filled with air. Such obstruction may be adenoids or enlarged tonsils. (*See* “Adenoids.”)

Bulging of one side of the Chest is caused by lateral curvature or twisting of the spine on its axis.

Rickety Chest.—This is very characteristic, and is one of the effects of rickets in childhood. The ribs are too soft while the lungs are developing, and so they yield at the weakest parts and form two grooves down each side of the body; and there is a row of knobs down each side of the breastbone where the ribs join it, knobs which are caused by rickety enlargements of the ends of the bones. The lower part of the chest is apt to bulge from lying over the liver. Such a chest, though ugly and misshapen, is not especially prone to disease.

Barrel Chest—(*see* “Strong, How to Become.”)—This deformity consists of an undue roundness of the chest, the result of blown-out and inelastic lungs. The chest is too short, the ribs too horizontal, and the shoulders raised.

Long Chest.—This is the opposite of barrel-shaped. The ribs slope down, the neck is long, the throat prominent,

and the shoulder blades stand out behind like wings. The lungs inside such a chest never are, and never have been properly expanded, and are very prone to become tuberculous—"consumptive." The deformity is curable by the correct use of a "developer."

Chicken-pox.—The medical name is *Varicella*. It is quite distinct from smallpox, which, however, it resembles somewhat. Chicken-pox develops about a fortnight after exposure to infection. It is not very contagious. There is a *rash* which comes out on the first day of illness, in successive crops of small pimples, on the *chest*, mostly, but also on the face. There may be a little fever. Death almost never results from chicken-pox.

The rash is characteristic; it consists of pink pimples, which become blebs containing watery fluid in about twelve hours. In a few hours more the fluid becomes milky in appearance and then the spots begin to dry up, and the pink ring round them gradually fades. A few of the pocks leave small whitish scars.

Treatment.—Light diet, isolation, and attention to the bowels are all that are necessary. The child must be prevented from scratching the spots. The itching may be relieved with a weak lotion of camphor water and carbolic acid, which any good druggist will supply.

Chilblains.—Nearly everyone is familiar with the appearance of chilblains, and a very large number of people whose circulation is weak suffer from them every winter. The skin affected with a chilblain is tender, and itches abominably as soon as it gets warm. As the inflammation goes down there is generally some shedding of the skin. In underfed and scrofulous children the skin of a chilblain sometimes breaks into a painful ulcer or sore, which is very difficult to heal. A further stage in the same process is *frostbite*, in which the part gets at last swollen and almost violet in color and little blebs form.

We must not forget that though chilblain is a local disorder, it is due to bad circulation of the blood, and this is often accompanied by poorness of the blood, which is what doctors call *anæmia*; so that it may be necessary to get the doctor to prescribe tonics and blood-forming foods, particularly cod oil and malt, as well as to treat the chilblain locally.

The chief thing is to stimulate the circulation of the

blood in the affected parts. For this purpose the parts must be kept warm. If the hands are affected, mittens or knitted woolen gloves must be worn continually, and, unless the feet are disabled by pain and swelling, plenty of walking must be done, and the feet and legs must be kept warm with woolen worsted stockings. After washing it is important to dry the parts as thoroughly as possible and to rub the chilblain with a rough towel. Friction is always useful if it can be borne. For painting on the chilblain there are three useful remedies—tincture of iodine, spirits of camphor and friar's balsam—all homely medicines.

If the skin breaks the ulcer must be treated as any other ulcer, but it is better to let a doctor treat it, because chilblain ulcers do not heal at all easily.

If the chilblain ever becomes a real frostbite, the only way is to rub it with snow until the circulation is restored. If you warm it rapidly at a fire you may lose a finger or nose from mortification. And all persons who are subject to chilblains are likely to be benefited by taking ichthyol as a medicine. (*See also "Skin Diseases" II.*)

Child Crowing.—The other common name for this is spasmodic croup; the medical name is Laryngismus. The symptoms of the ailment are—twitching of hands and face (which may occur even during sleep), and a sudden great difficulty of breathing, so that the child gets terrified and runs to its mother. The spasm ends as suddenly as it began, with a loud crowing noise. Sometimes children die in the attack without having uttered a sound, though this is rare.

Treatment.—It is especially rickety children, and those with worms, who get these spasmodic attacks. The doctor ought to be asked for advice as soon as the first one occurs. If a bad attack comes on, put the child into a warm bath, or if none is ready, dash cold water on its face and head, and tickle the back of the throat with a finger, to make it sick. Further treatment must be by medicine ordered by the doctor. (*See also "Croup."*)

Choking.—This may be caused by something which obstructs the air passages, a piece of food, a "plate" of false teeth, a marble, or a toy; or by a sudden swelling of the passages themselves, as happens after swallowing certain poisons, in diphtheria, and occasionally in chronic Bright's

disease. Or the throat muscles may be paralyzed and lumps of food may get into the windpipe instead of slipping easily down the gullet.

Everyone recognizes choking, there is no need to describe it. If a child chokes, and coughs vigorously, let him alone, but put a cup of water or tea in his reach, so that when he is ready he can wash the lump down. If the coughing is feeble and the face is getting dusky, slap him on the back, giving him a slap in time with each effort of coughing. Do not get excited, however. But if he really seems to be suffocating (and this takes a little time to happen), force his teeth open, hold them open with the knife handle, and sweep the finger along the back of the mouth from side to side. If the child is very small, turning it upside down and holding it up by the feet is very good practice.

If suffocation seems to have taken place already and the child is livid and *seems* dead—if the doctor has not yet arrived—the child's only chance is to open the windpipe and let the air in through a hole. Take a sharp-pointed penknife, or one blade of a pair of scissors, feel for "Adam's apple" in the throat, and then *push the knife in just below it, and keeping exactly in the middle line, and having opened the windpipe enlarge the wound downwards a little.* Air will rush into the windpipe and lungs, if you have been quick enough, and you have saved his life. You may need to hold open the windpipe wound with the scissors blades. But more likely the obstructing lump of food will be coughed up then and all will be well.

In cases of choking, where the throat is swollen, the same opening of the windpipe may be necessary. A person who swallows boiling tea or soup by mistake may get an intensely swollen throat and may choke. Nothing can be done without a doctor's advice.

Cholera.—This term is used to describe three entirely different conditions, namely, cholera infantum, cholera morbus and Asiatic cholera. The last is the epidemic form.

Cholera infantum.—Is an acute disease of childhood characterized by high fever, vomiting, purging and collapse, caused largely by hot weather, faulty feeding, dentition and bad hygiene.

This is a very serious condition and calls for prompt treatment, preferably by a physician.

Treatment consists of fresh air, coolness, laudanum in

very small doses to arrest diarrhea, brandy to counteract collapse, with bowel irrigations.

Barley water and beef juice are relied on for nourishment as soon as the stomach can retain food.

Prevention.—During the hot summer months give the child only breast or pasteurized milk and meats and fruits of undoubted freshness.

Cholera Morbus.—An acute disease resembling true cholera but rarely ending fatally, usually caused by eating partially decayed meat or fruit.

It is characterized by intense cramps in the stomach, vomiting, purging, fever and great prostration.

Give a dose of castor oil if it can be retained, brandy for the prostration, morphine by hypodermic injection, hot applications to the abdomen and ice for the thirst.

Asiatic Cholera.—True Asiatic cholera, which is always more or less prevalent in India, China and Arabia, has lately reached our thresholds. *Prevention* is the most important measure for us to observe. Preventive measures consist in having efficient quarantine officers, with quarantine of suspicious cases. As cholera is a water-borne disease freedom from contracting it is usually assured by using only boiled and filtered water and eating no uncooked food. Discharges from suspicious cases should be disinfected.

An attack of cholera is marked by the sudden onset of pain and spasms in the bowels, vomiting and diarrhea of thin rice-water-looking stools followed by great collapse and death in 50 per cent. of the cases.

In any suspicious case a physician should be called at the earliest possible moment.

Circumcision.—This means the removal of the foreskin of the male. The little operation is performed on every Jewish and Mohammedan male child as a religious rite. It certainly promotes local cleanliness and lessens the risk of local disease. Every qualified medical practitioner is competent to perform circumcision. The parts will be healed in about a week, but will take longer in the case of an adult. The operation is often performed to cure bed-wetting.

Cleaning.—A large number of the infectious or germ diseases are contracted by inhaling the germs in the dust. It

is of the greatest importance therefore that in homes, and places where people gather in large numbers this source of disease should be reduced to the smallest possible proportions.

As the weekly body bath of our ancestors has given way to the daily bath of our time, so has the dreaded cataclasm known as "spring house cleaning" given way to our daily or weekly cleaning. This has been rendered possible largely by the use of the modern vacuum cleaner, by the use of which carpets, floors, mattresses, furniture and curtains can be thoroughly cleaned without removing them from their regular positions.

Almost worse than no cleaning or dusting is the use of the feather duster, which simply stirs up the dust, making it easier to inhale, and never doing more than moving it from one place to another. If the vacuum method of cleaning is not available, the feather duster may be replaced by moist cloths, or moist saw dust on the floors, which will prevent dust from flying about during the process of sweeping.

Rooms containing the least number of dust-catchers are the most sanitary and healthiest, and hard wood floors with rugs are preferable to carpets.

In cleaning parquet flooring care should be taken to clean the floor first with "paille de fer" which can be bought for a few cents. This can be rubbed on the floor with the foot to take out all grease and other stains before applying floor wax. Butchers floor wax polish is the most satisfactory as it leaves no oil.

In cleaning furniture or any wood with polished surface, the best article is that known as "The Japanese Furniture Polish."

White painted surfaces, if soiled or greasy, should be wiped over lightly with a cloth dampened with turpentine and wiped with the grain of the wood.

For the floors of public buildings the use of such substances as Standard Floor Dressing is recommended to allay dust and promote cleanliness.

For ordinary flooring no better initial form of cleaning has ever been devised than the occasional old-fashioned scrubbing with soap, water and scrubbing brush with use of a mop, provided that these articles are subsequently

properly disposed of or cleaned, so that the germs they have collected cannot again become free and escape into the air.

Climate for Invalids.—There is no model or perfect climate in the world; none which will suit every kind of invalid. The dry ones have wind and dust; the moist, warm ones have malaria, and are relaxing; the cold, dry ones are not thus all the year round. If you want luxuriant vegetation and scenic beauty of that kind, then you find that the climate must be hot and damp, a very bad climate for nearly all consumptives. Sea air is excellent for many people, but does some asthmatic people much harm, and neuralgic people are very liable to be in pain at the seaside.

People with shattered constitutions ought to avoid warm, relaxing climates like the Florida Coast Resorts and choose places like Redlands and Riverside (Cal.), Aiken, Asheville, Virginia Hot Springs, Lakewood, St. Lawrence River, Bermuda or the Hawaiian Islands.

Nervous, excitable people should avoid such climates as those of Colorado, Idaho, and Wyoming.

A choice of climates for a few of the common diseases follows:—

Pulmonary Tuberculosis.—Arizona, New Mexico, Sierra Madre (Cal.), Colorado Springs, Adirondacks, Asheville, San Moritz (Switzerland).

Nervous, Excitable People.—Bermuda, Jamaica, Cuba, Florida Coast Resorts, Hawaii, Southern California, Asheville, Aiken, Old Point Comfort, Atlantic City, Lakewood.

Neurasthenia.—Yellowstone, Yosemite, Grand Canyon of the Colorado, Niagara, Great Lakes, Canadian Rockies, White Mountains, Maine Woods, St. Lawrence River, Mexico, Bermuda, and foreign travel.

Heart Disease.—Watkins Glen Springs.

Rheumatism.—Virginia Hot Springs, Mt. Clemens (Mich.), Watkins Glen Springs, Saratoga Springs, Paso Robles and Glenwood (Col.), Richfield, and Poland Springs.

Convalescence.—Lakewood, Atlantic City, Aiken, Virginia Hot Springs, Southern California, Bermuda.

Liver, Skin and Digestive Disturbances.—Saratoga, Richfield, Arkansas Hot, French Lick and Poland Springs.

HEALTH RESORTS.

Adirondacks.—General elevation, 1,500 to 2,000 feet. Climate cool. Large number of cloudy days with high humidity. Soil—light and sandy. Tree growth—pine, balsam, spruce, and hemlock.

Popular for the treatment of pulmonary diseases of tubercular origin.

Best known resorts are Saranac, Ampersand, Paul Smiths, Lake Placid, Blue Mountain Lake, Raquette Lake, Keene Valley, and Adirondack Lodge.

Aiken.—Near the Georgia line in South Carolina. Elevation, 500 feet. Pine country with sandy soil. Few rainy days and comfortable winter climate. Desirable for convalescence relaxation.

Arkansas Hot Springs.—Light alkaline-calic thermal springs used in the treatment of syphilis, gout, rheumatism, neuralgia, and skin diseases. Numerous fine hotels and baths.

Asheville.—Near the Blue Ridge Mountains, North Carolina, on a plateau of 2,250 feet elevation. One of the most popular of the southern health resorts—utilized especially in the treatment of pulmonary tuberculosis and diseases of the lungs. It is also a desirable climate for convalescence and rest after nervous strains.

Atlantic City.—On the Jersey Coast. The best known of the northern coast resorts. Abundantly supplied with fine hotels and sanatoria. Chief health features are derived from comforts available at the hotels, the baths, and the boardwalk near the ocean,—broad and of great length. The climate, though somewhat milder, is not greatly different from neighboring places. It is of most use medically to convalescents and to those needing rest and relaxation.

Bermuda.—A beautiful island 36 hours from New York by comfortable steamer. Patronized to the greatest extent by Americans about Easter-time. Delightful climate most of the year, many diversions and a restful atmosphere. Chief towns are St. Georges and Hamilton—the latter place having two good hotels. Ideal spot for convalescents, nervous irritability, cardiac and renal conditions, and for a rest cure. Best accommodations for invalids

in the Bermuda Sanitarium on Ferry Reach in West St. Georges.

Colorado Springs.—Attractive health resort at the foot of the Rocky Mountains near Pike's Peak, altitude, 6,000 feet. Abundance of sunshine, cool climate, low humidity, dry porous soil, beautiful scenery and beautiful residences, with pleasant social life.

This climate is admirably suited to pulmonary tuberculosis—especially the incipient forms.

Eastern Health Resorts.—Maine, Moosehead and Rangely Lakes. Cool, clear air. Fine fishing and camp life.

Poland Springs and Rockland—fine hotels and good climate.

Mt. Desert and the Maine coast. Cool refreshing climate. Frequent fogs. Attractive social life.

Florida Coast Resorts.—Jacksonville, St. Augustine, Palm Beach, Ormond and Tampa. Well supplied with magnificent hotels. Climate equable, temperate, warm and humid. Good for physical and mental relaxation but poor for pulmonary troubles.

French Lick Springs.—Orange County, Indiana. Sulphated saline waters.

Glenwood Springs.—Glenwood Springs, Colorado. Altitude, 5,200 feet. Fine accommodations. Cool, bracing air.

Hot saline sulphur springs with fine pool and baths, and natural sulphur vapor cave.

Of value in chronic rheumatism, gout, cutaneous and renal diseases.

Hawaiian Islands.—Twenty-one hundred miles southwest from San Francisco—6½ days by steamer.

Volcanic origin. Beautiful scenery. Tropical vegetation. Equable, comfortable climate, occasionally warm and moist.

Lakewood.—Ten miles inland from the Jersey Coast. Sixty miles south of New York—easily accessible and well supplied with fine hotels. In the heart of the Jersey pine belt where the soil is dry and sandy. Temperature usually 10° warmer than New York.

Well deserved reputation for curing protracted colds, catarrh, influenza, and all forms of convalescence.

Mt. Clemens, Mich.—Strong saline springs with good ac-

commodations. Useful in chronic rheumatism with stiffened joints, and neuralgia, scrofulous disorders of skin, bones and joints.

Old Point Comfort.—North of Hampton Roads, Va., near Fortress Monroe. Temperature variation from 40° (Winter) to 80° (Summer). Bathing, boating and attractive social life. Of benefit to people suffering from catarrh, bronchitis and nervous troubles.

Poland Springs.—South Poland, Maine. Superb hotel. Mild alkaline-calic water, used in treatment of rheumatism, gout, dyspepsia, renal and hepatic disorders.

Richfield Springs.—Lake Canandaigua, N. Y., altitude 1,750 ft. Beautiful country. Attractive hotel life. White Sulphur Springs—of value in insomnia from overwork, nervousness or anxiety, stomach disorders, gout, rheumatism and some disorders of the liver and kidneys.

Saratoga Springs.—The most famous watering place in the United States, with many large hotels. Most of the waters may be described as muriated alkaline-calic carbonated waters. The best known are the Congress, Geyser, Hathorn, Kissingen, Seltzer, United States, Vichy, Carlsbad and Champion Springs. As these waters are quite potent they should be taken under medical supervision.

They are most used in dyspepsia, engorgement of the liver and portal system and chronic constipation.

St. Lawrence River.—The Thousand Islands offer a delightful region for rest and recreation with cool, equable medium-moist climate. Fine hotels, or rough camps are available.

Southern California.—Coronado.—Attractive coast resort with fine hotel and equable marine climate.

Los Angeles.—Enterprising city 14 miles from the ocean and also from the mountains. Mild climate—many fogs.

Monterey. One hundred and twenty-five miles south of San Francisco on the Pacific Coast. Fine hotel—Del Monte—and beautiful country-gardens and drives. Climate mild, equable but humid.

Pasadena. Nine miles from Los Angeles—altitude 900 ft. Twenty miles from the sea and five from the mountains. Charming city of attractive homes and fine hotels. Restful climate.

Santa Barbara.—Climate mild and equable—like the Riviera. Many foggy days. Good hotel.

Adapted for cases of nervous exhaustion and convalescents.

San Diego. One of the most equable climates in the United States, with maximum number of sunny days, although the humidity is not low. Nights are cool. Adapted to cases of nervous exhaustion.

Sierra Madre.—Twelve miles north of Los Angeles. Altitude 1,700 ft. Most desirable climate in Southern California for consumptives.

Paso Robles.—El Paso de Robles, California. Altitude 800 ft. Climate mild and luxurious, atmosphere pure, balmy, and invigorating, equable and dry. Hot springs are sulphurous and alkaline. Good bathing accommodations. Beneficial to sub-acute and chronic rheumatism, scrofula, blood, glandular and cutaneous affections.

Redlands. Elevation 1,350 ft. at foot of San Bernardino Mountains. Fertile country, climate warm but not hot, and equable. Comfortable for invalids.

Riverside. Elevation 850 ft. Sixty miles east of Los Angeles, eight miles from Redlands. Many fine residences and hotels. Fertile orange country. Comfortably warm and dry climate. Delightful for invalids and convalescents.

Strong Medicine.—In *Large Doses for Those Whose Enthusiasm is Failing.*

Yellowstone National Park (Wyoming). A museum of nature containing geysers, boiling springs, terrace and crater formations, cliffs of obsidian, deeply cleft canyons, petrified trees, sulphur hills and pine forests. Situated on a plateau of 8,000 ft. elevation surrounded on all sides by mountains.

The Grand Canyon of the Yellowstone is a magnificent canyon 20 miles long, 600 to 1,200 ft. deep, with walls of gorgeous colors. Climate bracing. Nights cold.

Grand Canyon of the Colorado (Arizona.) One of the most stupendous natural wonders of the world. 3,000–5,000 ft. deep, 217 miles long, 10–13 miles wide. The walls are terraced and carved into a myriad of pinnacles and towers and are tinted with various brilliant colors.

To the south are the cliff dwellings, the petrified forest and the land of “silence, sunshine and adobe.” Elevation of the rim of the canyon about 7,000 ft. Climate dry and bracing, with cool nights.

Yosemite Valley (National Park). On the west slope of the Sierra Nevada Mountains in California. A valley with level floor 8 miles long with enclosing walls 3,000–5,000 ft. in height—almost vertical. The chief features are the Yosemite Falls (2,500 ft.), Bridal Veil Fall, El Capitan peak (7,042 ft.), and Half or South Dome (8,852 ft.).

Niagara Falls, New York. On the Niagara River. One of America's greatest natural wonders. American Falls 167 ft. high, 1,000 ft. wide. Canadian Falls 158 ft. high, 2,550 ft. wide. Volume of water 12 million cubic ft. a minute.

The Great Lakes.—"In all the world no trip like this." A delightful steamer trip of several days on fine steamers from Buffalo via Mackinaw to Duluth or Chicago, through Lake Erie, the Detroit River, Lake St. Clair, Lake Huron, Lake Michigan or Lake Superior through the Sault St. Marie. Pure bracing air, pure water, at times out of sight of land, at times running close to picturesque and refreshing land scenery.

Canadian Rockies.—Banff—4,520 ft. elevation. The headquarters of the Canadian National Rocky Mountain Park. Fine hotels here and at Laggan (5,040 ft.) Glacier (4,095 ft.) and Field (4,064 ft.)—the last near the famed Yoho Valley. The magnificent mountain peaks of this region are almost innumerable—averaging 10,000 to 12,000 ft. in height and of a rugged nature. Ideal camping and fine hunting, with cool bracing air.

Virginia Hot Springs.—Large modern hotel and elaborate baths. Popular health resort in Spring and Fall. Alkaline-calcic springs resembling those of Aix-les-Bains, used in rheumatism, gout, sciatica, neuralgia, etc. Competent physicians.

Watkins Glen Springs.—Watkins, N. Y. on Seneca Lake. A modern, well-equipped sanitarium with beautiful surroundings. Salinic-calcic waters charged with carbonic acid gas used in the treatment of glandular and rheumatic troubles, gout, lumbago, sciatica and chronic diseases of the heart. For the last the Schott method is employed as at Nauheim.

White Mountains.—The air of the White Mountains is cool, pure and clear. Popular resorts are Bethlehem, 1,459 ft., Jefferson, 1,440 ft., Dublin, 1,500 ft., Franconia, 1,100

ft. and Bretton Woods, where is located the magnificent Mt. Washington hotel.

Cold in the Head (Nasal Catarrh).—What is the meaning of that very common kind of catarrh called a cold in the head? It is probably this—that the catarrh (with all its sneezing, shivering, nose-running) is an effort on the part of nature to get rid of some *germs* which we, in a minute of depression (due, *e. g.*, to *cold*, *fatigue*, or *worry*, or *lack of food*), breathed into our mouth or nose and allowed to settle and breed there. Do what you will with a cold in the head, you cannot “cure” it, and if you hasten nature’s *three day process* too much, then the system may fail to throw off the poison, and the cold “gets down into the chest” as we say, and we get, perhaps, bronchitis. The present writer is sure that all colds are first *local* to the nose or throat, and that local treatment, aiming both at easing the symptoms and encouraging the natural process, is most likely to be serviceable. A cold, then, takes three days, more or less, to run its course, and the sensible way of dealing with it—since we cannot “cure” it, is to help it along and give the system every chance of throwing it off. This “throwing-off” the poison is done by the kidneys, lungs and skin, but chiefly by the two former, for the skin’s nervous apparatus has been rather out of order since the “cold” was “caught.”

So the best “cure” is to make the blood as pure as we can. As soon as ever you know that you have got a cold, start right away to treat it. This is done (1) by keeping indoors from the moment that the cold is caught, in a well-ventilated (not stuffy) but warm room—say 60°–65° F.—by wrapping up, as long as any feeling of chilliness or feverishness lasts; and by sleeping a little more warmly at night than usual. (2) As you are to rest and stay indoors, even if not in bed, for three days, you require very little food, and *no* meat food. Your object is to clear the blood of all impurities. Drinks of hot lemon water should be taken often, to wash out the stomach and bowels and flush out the kidneys.

Now as to medicines. Take two grains of calomel followed by aperient salts. Take—frequently repeated—coryza tablets containing aconite and belladonna, and douch out the naso-pharyngeal passages frequently with dilute borolyptol, listerine, glycothymoline or alkalol.

But your cold is, perhaps, a more serious infection than you thought; you are feverish and wretched, and cough a little. Have a hot mustard foot bath at bedtime, then; and when in bed, a basin of hot gruel. Get as much rest and sleep as you can. For the cough, take ipecacuanha wine, 10 drops, and paregoric, 20 drops, in some water every three hours (smaller doses for children).

On the fourth day, if much better, you may go out, if warmly wrapped; don't overweight yourself with clothes, however. Then begin a tonic medicine—quinine and iron mixture twice a day. (*See also "Cough" and "Sore Throat."*)

Cold-on-the-Lip.—This is a little skin eruption which occurs on the lips, or in the nostrils sometimes, when one has a "cold in the head." Its proper name is *herpes*, and it is described under that heading. The same eruption is apt to occur on the private parts, and in some people, round the waist, where it is called *shingles*. (*See "Herpes."*) It is contagious to some extent and may be communicated by kissing. It is not dangerous.

Once formed these herpetic vessels are very difficult to control, but they may sometimes be aborted, in the earliest stages, by peroxide of hydrogen and camphor cream locally, in connection with a calomel cathartic.

Colic.—A violent sudden pain in the abdomen.

(1) *Flatulent colic* is often very sudden and very painful, but it is caused by nothing more serious than "gas" in the bowels, which makes them swell out, and which is caused by decomposition of food, the indigestion being due to something wrong with the *bile* or other of the digestive juices. Such colic is especially common in weak and in hysterical people, also in artificially-fed infants.

(2) *Wind colic in small infants* must, of course, be treated by attending to the feeding, and to more cleanliness in the bottles and teats used. This griping in children is sometimes cured by a smart purge (say two teaspoonfuls of castor oil); but when a child is continually having griping attacks (as shown by it making grimaces and drawing up its legs), there can be no doubt that the food disagrees with it. Oil of anise, one or two drops on a small lump of sugar, may be given every hour and Dill water is a favorite remedy in teaspoonful doses every hour. In *adults* the colic is generally due to some irritating article of food which

may be purged out with an ounce of castor oil. A hot-water bottle applied to the belly gives much relief.

- (2) *Lead colic.* (See "Lead-Poisoning.")
- (3) *Renal colic.* (See "Stone in the Kidney.")
- (2) *Liver colic* (See "Gall-Stones.")
- (4) *Liver colic.* (See "Gallstones.")
- (6) Intussusception or telescoping of the gut.
- (5) Volvulus, or twisting of the gut.

The last two are rare. Intussusception of the gut is *similar* to what takes place in the fingers of a tightly-fitting glove as they are turned outside in when the glove is drawn off a warm hand. The intense pain, bowel obstruction, passage of blood from the rectum and collapse of the patient show what has happened and very soon there is a big tumor to be felt in the belly and the patient begins to *vomit* the contents of the bowels. Nearly all the cases are in children who have been too severely purged. It is useless for a layman to attempt to treat that.

Collapse.—By this word is meant the state of utter prostration which may follow a serious accident, a great loss of blood, an acute fever, or a blow in the pit of the stomach. Very great grief may have a similar effect. In all cases of collapse or shock, *keep the sufferer warm*, elevate the extremities, loosen the collar and all constricting bands and stimulate with sal volatile, smelling salts, aromatic spirits of ammonia, whisky or brandy.

Coma.—By this term is meant insensibility, unconsciousness, in which the patient cannot be roused, and touching the naked eyeball with the finger tip produces no effect. The breathing is deep and slow and noisy. The chief causes of coma are apoplexy (which *see*) and diabetes (which *see*). Sometimes the comatose person dies without regaining consciousness; sometimes he recovers. In diabetic coma, however, his chances of recovery are very small.

Concussion of the Brain (Stun).—A blow on the head or a fall may so shake up the brain as to cause the patient to be stunned. This is shown by pallor of face, and a state of faintness and unconsciousness, which may last only for a few minutes, or may continue for hours. Recovery may soon occur with vomiting, if there be no severe internal injury to the head, but if the concussion has led to bleeding in or upon the brain great danger to life will

ensue. Put patient in bed and keep head high and send for doctor.

Confinement.—To calculate when a baby will be born, take the date of the last day of the last menstruation, add seven days and go back three months. For instance, if the last day of the last menstrual period was January 7th, add seven days—January 14th, and go back three months, to October 14th, which will be the date of the birth of the child.

Constipation.—(See “Costive Bowels.”)

Consumption.—This disease causes more deaths in this country than any other form of illness. In infancy it attacks the brain, in childhood chiefly the bowels, and in early manhood the lungs suffer most often. In former days the disease used to be called a *decline*. To be “in a decline” meant that the lungs were diseased, and that an early death by gradual wasting was possible.

Until quite recently consumption, the medical name for which is phthisis, was considered to be essentially an inherited disease; but of late years medical opinion has changed, and all doctors now consider that phthisis is capable of being caught by infection, which arises from germs breathed in from the air having escaped from consumptive lungs, or from those contained in tubercular milk and tubercular meat.

To-day we do not believe in the *inheritance* of consumption from parents. Each case of consumption is viewed as a case of infection by the germ of the disease. What may be inherited, is a weakly state of body, favoring infection.

The alteration in modern medical opinion has been due to the great improvement effected in microscopes in recent years, by which it has been possible to discover the presence of extremely minute organisms, called bacteria or bacilli, in the phlegm coughed up by consumptives, and even in their saliva, their urine, and blood. By experiments on animals it has been shown that inoculation with these bacilli will cause the disease to break out in them.

These bacilli, however they may enter the human body, whether in our food, or in milk, or by being inhaled in the air we breathe, will set up the state of disease now called tuberculosis; and the part first attacked, although most often the lungs, may be the bowels, kidneys, or skin.

II.—Cattle also may die naturally from tuberculous dis-

eases set up by infection with bacilli, and it is an accepted opinion that children may get infected from milk taken from cows already diseased. Even grown-up persons may become infected with tuberculosis by eating the meat obtained from diseased cows. It is for this reason that so much attention is now given to the examination of slaughtered animals in butchers' shops.

Cattle are certainly liable to tuberculosis of the internal organs, and may die of it. The slaughter houses of our cities are now under inspection, so that diseased meat may be discovered and destroyed; but until recently the Jews alone were particular about refusing the meat of diseased cows, and it is certain that the Jews have always had a lower death rate from consumption than Christians. With the Jews it is a matter of religion to have their butchers' meat passed by a Hebrew official, and it is then marked as Kosher.

The principal contagion from consumption of the lungs is found in the phlegm coughed up and expectorated. In this phlegm the bacilli are to be found in millions. When the phlegm dries up and is powdered under foot, the wind blows the germs about, and women's long skirts spread them from room to room. This dust is inhaled, and falls into our drink and food, and so the disease is spread.

If there is one point more important than all others, it is that all consumptives should spit into basins or bottles containing antiseptic liquids, or else into paper handkerchiefs, which can be burned. These are now procurable very cheaply.

Consumptive patients, although they feel great debility, have a bad digestion, frequent cough, and often suffer from diarrhea and night sweats, yet they are generally of a hopeful turn of mind. They grow gradually weaker and thinner month after month, and yet are always looking forward to a recovery, which is unlikely.

III.—In cases of consumption or tuberculous disease of the lungs, it is usual to find one lung affected before the other, or one lung much more affected than the other; and the upper lobes, under the collar bone are generally the first to suffer. The disease at first causes patches of consolidation, which may either dry up and become chalky nodules, or else, if the general health be bad, the patches soften down, and abscesses form. The lung structure gets

eaten out into holes by ulceration; these are called cavities, and matter, with phlegm, collects in them, especially at night; hence it is that consumptives so often have a severe cough in the morning, the cough being for the purpose of getting rid of the accumulation. Phthisis is not usually a painful disease, the only pain in the chest being usually due to attacks of pleurisy in the dry stage. Much discomfort is, however, often felt from the disordered, shallow, and rapid breathing.

IV.—“GALLOPING CONSUMPTION.”—Although consumption is most common in its chronic form there is an acute variety, most commonly seen in young adults, in which the first symptoms are fever, shortness of breath, and weakness, and these lead on to death in a few weeks. In such cases the lungs are found after death studded with numerous quite small points of disease, which have abolished the use of the lungs for breathing purposes, and death is from the impurity of the blood.

V.—“CHRONIC CONSUMPTION.”—Chronic phthisis or tuberculous consumption of the lungs seldom causes death the first year, and it may last for many years, and even after a long course there may be an almost complete recovery. This slow recovery is more common of late years than formerly; this good result is from the modern plan of open-air treatment and good feeding.

The ordinary consumptive patient is a pale, round-shouldered, thin person, with a chronic cough, who suffers from loss of appetite, indigestion, and occasional diarrhea; his heart is feeble, and he is short of breath, and is liable to night sweats.

A long continuing cough, spitting of a little blood, and a very slow gradual loss of weight and fat, with weakness are the most frequent signs of the onset of consumption, and should always alarm a patient's friends, and this occurs before any notable lung diseases can be found by examination. As the beginning of the disease is so faintly marked, there being no violent or urgent symptoms, it very often happens that the ailment is well established before any curative measures have been undertaken. This is a great misfortune, because consumption of the lungs is especially a disease which is curable at the beginning but incurable when the structure of the lung has been destroyed, and the lung is full of cavities.

The diagnosis of the disease, although still imperfect, is much more easy than in olden times; the modern physician examines the chest by observing its state of expansion by the breathing; he feels its expansion with the hands; by tapping the chest all over he discovers any loss of the natural elasticity, and by the use of the stethoscope he hears the sounds made by the air entering and leaving the lungs, and can discover whether the air tubes are too dry, or if they contain liquids, such as phlegm, blood or matter; and can discover whether or not the lung is already eaten out into hollow places, called cavities.

Cases of serious lung disease vary widely as to symptoms, and especially as to the presence or absence of bleeding. The coughing up of blood is a very alarming symptom, and one which in rare cases may cause sudden death from fainting or suffocation. In most patients, however, blood-spitting, or hæmoptysis, is only slight, but it may be frequent. When it occurs quite early in the case, and is only trifling in amount, it does no harm, and, indeed, serves the useful purpose of calling attention to the nature of the illness, and it leads to prompt and serious treatment of the patient. When it is profuse, it causes weakness, for a consumptive patient cannot afford to lose blood, and is generally already pale, and his blood of poor quality. Hæmoptysis is a serious matter when it occurs from the rupture of a large blood vessel in a cavity in the lung, and immediate medical aid must be summoned, and until a doctor arrives the patient must be put to bed, with head and shoulders raised, and must be cautioned not to talk or use any exertion. Ice may be given him to suck in small quantities.

VI.—*Treatment of Consumption.* (1)—The treatment consists of every effort to improve the general health of the patient by sanitary methods, by good feeding, by open-air life, and gentle exercises, and by the treatment and cure of all painful and exhausting symptoms as soon as they arise.

It must be admitted that although science has been at the work of searching for an antidote to the poison of tuberculosis for hundreds of years, the constant result has been failure.

Mercury, iodine, and arsenic have each had a short reputation as a cure for phthisis; and so have creosote, car-

bolie acid, guaiacol, and sulphur. Dozens of substances have been tried as vapors and inhalations in hopes of killing the germs in the air tubes of the lungs, such as turpentine, terebene, eucalyptus oil, prussic acid, iodine, naphtha, tar vapor, and oxygen gas; but they have all failed to check the disease. Then, again, local applications to the chest have often been vaunted as cures, such as applications of iodine liniment, and turpentine, mustard plasters, and blisters of cantharides; also the use of issues and of cupping.

There are many clever physicians in different parts of the world at work on the treatment of consumption by vaccines and serum. Marmorek, F. von Behring, Wright, Trudeau and others, are those to whom we look for further knowledge on this subject, but though they are all successful in some of the cases, they do not succeed often enough to enable them to pin their faith to any one method. There is no doubt, however, that the use of some vaccines in the form of certain tuberculins is of appreciable assistance to the other methods of treatment in the early cases of consumption with slight involvement of the lung.

VII.—*Treatment of consumption.* (2)—After mentioning so many medicines which do so little good to persons who are suffering from phthisis, or tuberculous consumption of the lungs, we may fitly advise as to the treatment which may be expected to lengthen life, and so give nature a chance to cure the disease, for that seems the utmost which present knowledge can do.

Reliance must be placed more on general principles than upon drugs, and most important are the *open-air life*, plenty of good food, and the addition of the preparations of cod-liver oil and malt. It is of great importance, on the other hand, to avoid unhealthy, close bedrooms, gaslit workshops, and the too close associations with other persons. Cases of consumption, early taken to fresh air sanatoria and there treated, almost invariably recover. The main point is to detect the disease in its early stages.

The utmost importance must be given to rules to avoid self-contagion, by cleanliness, changes of clothing and bed-linen; and remember that these patients must never swallow the phlegm they cough up, but must use a pocket spittoon or a paper handkerchief, which can be burnt.

The most certain way for a consumptive to infect other

people is to cough or sneeze without protecting the mouth with a piece of cloth. As a result of the coughing the saliva is expelled in a fine spray which may float about in the air and be inhaled by someone else at a distance of several feet.

The next most certain way for a consumptive to infect other people is to spit on the floor anywhere around him; and the reason is that when the phlegm dries it becomes ground into the dust by the feet, and the dust floats up into the air which others breathe, gets into the air tubes of their lungs, and thus starts the disease in a new place.

The consumptive needs to be treated as an invalid, and should be made to take regulated exercise and regular rest, and regular meals. The appetite may be encouraged by mixtures containing vegetable and acid tonics, and the digestion may be assisted by doses of pepsin, and pancreatin, or by food partly digested by chemical processes.

Much milk and milk foods are necessary, and well-cooked dishes, but the cookery is better plain and good than of the fancy sort; avoid giving shellfish, pastries, cheese and vinegar; but give more than usual of fresh fruits, dried fruits, jellies, fresh fish and fresh, boiled vegetables. Dried fish, bacon, ham, and tinned foods are less digestible, and are unsafe. Emulsion of cod-liver or olive oil, or sardines with oil, are all valuable, and so are malt extract, maltine, meat extract, preparations of blood and bone marrow. Sedative medicines are needed for the cough, with astringent mixtures for diarrhea, also special drugs to check night sweats and losses of blood.

Night sweats are a serious symptom, which must be checked by medicines, as far as possible, because they cause great prostration, and are also a source of danger by causing the sufferer to lie in wet linen, in which state he may fall asleep and lie uncovered, and so catch fresh cold. In these cases patients should wear flannel clothing and lie between blankets.

Diarrhea of a particularly intractable sort often occurs in the latest stage of consumption, and may resist all medicines. It is believed to be due to ulcerated spots within the bowels. The aromatic confection powder is often useful, given with paregoric, or chalk and opium mixture. In

severe cases doctors may give dilute sulphuric acid and opium; or 10 grains of camphoric acid thrice daily.

The cough of consumptives varies very much in character. If dry and barking, it may be due to pleurisy; a very frequent cough is often due to slight attacks of congestion of the lungs. A continuous cough, with profuse expectoration, is a sign that patches of the lungs are softening and breaking down into cavities. A cough with clear, frothy phlegm shows the occurrence of a little passing attack of bronchitis.

We append a few "recipes" which may be useful—always remembering that doctoring without a doctor is not without risk.

VIII.—*Treatment of Consumption.* (3)—

- 4 (a) For daily fever and night sweats.—Quinine hydrochlorate, 30 grains; calcium hypophosphite, 64 grains; tincture of nux vomica, 160 minims; tincture of orange, 1 fluid ounce; glycerin, two ounces; water, to eight ounces. Take one tablespoonful of this mixture half an hour before meals thrice daily.
- (b) For night sweats.—Atropine sulphate—gr. 1/100 taken at bedtime.
- (c) For a cough of irritation, without much phlegm—a dry hard cough.—Codeine, 2 grains; syrup of orange flowers, 1 ounce; distilled water, 1 ounce. Take a teaspoonful occasionally, holding it in the mouth a minute before swallowing.
- (d) For a cough with much phlegm.—Pure creosote, 1/2 drachm; spirit of cinnamon, 4 drachms; tincture of orange, 2 ounces; glycerin, to 4 ounces. Take a teaspoonful in a wineglassful of water three times a day.
- (e) Vomiting—Take a hot drink of milk and a teaspoonful of brandy half an hour before meals; and 5 grains of pepsin, and a few drops of lemon juice after the meal.
- (f) Loss of appetite tonic.—Tincture of nux vomica, 5 minims; sodium bicarbonate, 5 grains; spirit of chloroform, 20 minims; infusion of calumba, 1 ounce. Take this dose an hour before each meal.

- (g) Diarrhea—(1) If without pain—castor oil, 1 teaspoonful; hot milk, 2 tablespoonfuls; brandy, 1 teaspoonful. Take this draught first thing in morning. (2) If with much “wind” in stomach—Liquor calcis saccharatus, 1 drachm. Thrice daily. (3) If with pain—Give an enema into the rectum of 10 drops of laudanum and five grains of tannin in 2 ounces of mucilage of starch, twice a day.

Corns and Bunions.—Nothing much can be written about corns or bunions that will be of real service. They are thickenings of the skin caused by pressure or irritation of badly-fitting boots. When the bones of the toe and the joint also become involved we call the trouble a bunion. The first requisite is a well-fitting pair of boots, roomy enough, and *straight* along the inner side. Hard corns ought to be shelled out neatly by a competent chiropodist. Amateur chiropody is generally foolishness. A soft corn, which is one that has become sodden and soft through neglect and perspiration, needs ordinary cleanly surgical treatment. If a bunion is forming, a boot made with a *toe post* inside should be worn; but later on nothing but a little operation on the joint will be of any use. A great many corns have a tiny drop of *pus* right in the inside of them, and that causes an irritation which makes the skin hard over them. A good chiropodist will know how to deal with it. Of course, there are *corn solvents*, which aim at softening the skin so that you can peel it off; and there are *corn plasters* which relieve the pressure of the badly-fitting boots. But the really sensible way to deal with a corn is to have it removed by a chiropodist, and to wear more suitable broad-toed boots in future. Solvents (so-called) are of little use in bad cases.

Corpulence or Obesity (Too FAT).—Obesity is very greatly a question of heredity and no amount of dieting will make a difference to some people. It may be said that when proper dieting cannot reduce corpulency, along with exercise and attention to skin and bowels, no drugs can possibly influence this condition of body.

There are a few well-recognized causes of being too fat. One is over-indulgence in alcohol, another is a too indulgent, selfish and luxurious life, and another is a too sedentary

life. Women very often get very fat at the time of the change of life (*see* "Change of Life."). Idiots are very often too fat, and so are many anæmic girls.

With regard to dieting, there are two main causes of getting obese—the eating of too much fat-forming food, and the inability of the body to deal with the food properly. Of course, these two causes may act together. A person who is too fat may be eating too much every day, and may also be too feeble to make use of the food he eats, so that it gets stored up in his body as fat, and he has to carry it about with him. Speaking generally, to begin to get too fat is to begin to grow old, and that is why people should and do avoid it. That is why the old gentleman who has left business takes to gardening, to keep down his fat; and why the middle-aged maiden lady, with a small cozy income used to go bicycling for exercise. If you are too fat and want to reduce it, first consult a doctor. Let him examine your heart, liver and lungs, because they may be hampered by the fat, and any sudden exercise may cause faintness and even death, if the heart be fatty. If there is no serious mischief yet in any organ, you may prepare to take down the fat. There are four ordinary ways of doing this:—(1) To "do Banting," *i. e.*, to go without all fats, sugars and starchy foods, and eat only lean meat and green vegetables (*see* "Banting"); (2) To eat less sugars or starchy food such as puddings, bread, etc.; (3) To drink almost no liquids with meals and none at all between meals; (4) The most complete and thorough method is that of Oertel. It consists in (*a*) climbing hills for hours every day; (*b*) meals in small quantities, at long intervals; (*c*) only one or one-and-a-half pints of fluid is allowed to be drunk in every twenty-four hours. Of course, all these plans require a little effort of will, and perseverance, and so many fat people are also lazy that they seldom can get up enough energy to carry out any plan thoroughly. An excellent plan is to eat every day only one pound of raw, or nearly raw, gravy beef, minced up, and divided into four meals, accompanied by the drinking of as much very hot water as possible (*see* "Salisbury Treatment").

Note that certain persons are by habit of body and inheritance inclined to develop undue stoutness. In such cases it is dangerous to attempt to reduce body weight be-

yond a certain point. Interference with the natural bodily constitution always results in disaster, and therefore the family history must be taken into account in all cases of treatment of obesity.

Diet for persons who are too fat.—FORBIDDEN.—All fat and fatty meats such as goose, duck, pork. All fatty fish, salmon and eels. All light farinaceous puddings. Potatoes, peas, beans, and such vegetables. Butter, cream. All sweet jams; sugar with fruit or tea. It is starchy and sugary foods which tend to make fat.

ALLOWED.—Lean meat and lean poultry in strict moderation. Lean ham and tongue. Fish without rich sauces, and with lemon or vinegar. Green vegetables, cress, lettuce, French beans, etc. Fresh fruit in small quantity. Dry oaten biscuits and gluten bread. A tablespoonful of good whisky, in water, *after* lunch. Tea or black coffee without sugar, at breakfast or tea-time.

Costive Bowels.—An enormous number of people suffer from costiveness or CONSTIPATION; and it is quite common to find people taking medicines that other people have told them are “good for costiveness,” instead of trying to find out what their own costiveness is *caused by*, and seeking to remedy that particular cause. We shall say nothing here about the costiveness which is merely a symptom of some disease, such as fever, anæmia, Bright’s disease, and so on. The commonest causes of constipation in otherwise healthy people are:—

1. Sedentary habits, so that the muscles of the bowels are lax and weak, like all the other muscles.
2. Unsuitable diet and habits of eating.
3. Nervousness, because of pain in the back passage, due to piles, or ulcers, etc.
4. Something wrong with the liver, so that there is not enough *bile* secreted, though there may be too much in the blood, causing jaundice.
5. Occupations which cause continual free perspiration; and diseases like diabetes. In such cases the bowels are costive because there is not enough water left in them.

(1)—Women are generally more sedentary than men, especially milliners and shop girls; but men clerks and those confined to the house also are very apt to be costive.

Young women too often have a false delicacy in these matters, which leads them to postpone relief of the bowels. All such sedentary persons should make a habit of attempting relief of the bowels *at a fixed hour every day, until success is attained*. This rule is much more important than it appears at first sight.

Secondly, regular bodily exercise must be taken. Time must be found for it somehow. Walking is best.

Thirdly, a laxative should be taken regularly for a time until the habit has become "second nature" to the bowels. A purge is too strong; a laxative such as one of these is best:—

Cascara pill, Triplex pill, aloë belladonna and strychnine pill, Lady Webster pill, compound licorice powder, Sal Hepatica, Hunyadi Janos, apenta water, sodium phosphate, or citrate of magnesia.

(2)—As to diet in costiveness or constipation, many people eat too much meat, and many others take too little fluid. An excellent plan is to take half-a-pint or more of pure cold water before breakfast and again before going to bed; or else to drink a free draught of water *after* every meal. Some prefer to drink hot water. The following foods are liable to cause constipation:—Eggs, milk, tapioca, sago, rice. And these are "good for constipation":—Green vegetables, stewed fruits, wholemeal bread, maize, prunes, Turkey figs, honey, treacle, gingerbread (excellent), Spanish onions. *The bad habits of eating are, to eat too fast, to bolt the food without chewing it, to drink too much alcohol, to drink tea with meat foods.*

(3)—Nervous people with piles or fistula dread a motion of the bowels. They should use a glycerin suppository every other day, and apply cocaine and bismuth ointment locally.

(4)—Liverishness is generally accompanied by costive bowels. Regular exercise must be taken and a blue pill to affect the liver, may be taken at night, and a little apenta water in the morning.

(5)—Persons who sweat a great deal ought to drink plenty also.

Cough.—Let it be clearly understood that a cough is not a disease in itself, but only *a sign* of some disease. A cough may show the presence of indigestion, for example, being caused by irritating food in the stomach; or of bron-

chitis (inflammation of the air tubes in the lungs); or of tuberculous disease of the lungs (see "Consumption"); or of a relaxed throat; or of inflammation of the voice box; or of a tumor, such as an aneurism, in the chest.

The first thing to discover then is, *what causes the cough?* To stop the cough is not to cure the disease, and sometimes it may be even dangerous to stop a cough.

If the cough is hard and short and frequent, it is probably due to indigestion, and no phlegm is coughed up, or "raised," as country people say. If it is hard, painful, brassy in sound, and later on accompanied by much phlegm, it may be due to bronchitis.

Children with short, hacking coughs, often have worms in the bowels. Many infants cough during teething. A *sudden* cough coming on at night, *hoarse*, harsh, noisy, clanging, and panting for breath, will mean the disease called croup.

It is impossible, in the limits of such a book as this, to do more than give the intelligent reader a general idea about the meaning of coughs. As to treatment, it ought, of course, to be left to the skill of a medical man. Yet there are cases in which some of the following formulas may be useful:—

1. *For a croupy cough*.—Ipecacuanha wine, antimonial wine, syrup of squills—of each, 2 drachms; distilled water, to 3 ounces. For a child of about a year old. A teaspoonful to be given every quarter of an hour until vomiting occurs; then half a teaspoonful every three hours, until cured.
2. *For winter cough in adults*.—A few drops of terebene (pure) on a piece of sugar dissolved in mouth thrice daily; or a teaspoonful of glyco-heroin in water every 4 hours or so.
3. *Routine mixture for chronic bronchitis in middle-aged people*.—Carbonate of ammonia, 24 grains; tincture of squills, 2 drachms; compound camphor tincture, 3 drachms; infusion of senega, 8 ounces; iodine of potash, 24 grains. A tablespoonful of this mixture may be taken twice a day and two tablespoonfuls at bedtime, additional.
4. *For chronic cough in a rheumatic person*.—Salicylate of soda, 6 drachms; glycerin, $\frac{1}{2}$ ounce; colchicum

root wine, 6 drachms; compound syrup of squills, 1½ ounces; camphorated tincture of opium, 2 ounces. Take a teaspoonful in some water every four hours.

Some chronic coughs, even if not of a tuberculous nature, are benefited by cod-liver oil and malt and some require a change of climate. *It must always be borne in mind that a chronic cough may mean the beginning of consumption.* Therefore a cough should *never* be allowed to continue for more than two weeks without consulting a physician to find out what the cause of its continuance is. Remember that an early diagnosis in pulmonary tuberculosis or consumption is half the battle won.

Cracked Nipples.—Many women who suckle children suffer from painful cracks and sores of the teats of the breasts. They ought to be wiped quite dry after suckling, and glycerin of tannic acid painted on with a brush into the cracks. Alcohol, in the form of methylated spirit, or spirits of wine, may be used to bathe them if they are soft and tender. Slight cracks may be painted with *flexible colodion*. (See also “Pregnancy, Hygiene of.”)

Cramp in the Calf of the Leg.—Many people are occasionally seized with painful cramps of the calf muscles when in bed at night. The causes of such cramps are over fatigue, nervous exhaustion and “goutiness,” by which we mean that the body is not able to throw off waste matters through skin and kidneys, as well as usual.

Treatment.—(1) Sometimes smart rubbing of the affected muscles will relieve the spasm.

(2) At other times, applying tight elastic bandage round the *thigh* relieves the cramp at once.

(3) The calf muscles are used to draw up the heel; those which push down the heel and raise the foot are “antagonistic” to the calf muscles. It is often a good plan, then, to forcibly raise the foot by muscular action.

(4) Massage of the legs will cure bad cases.

(5) Five grains of salicylate of soda swallowed thrice daily, between meals, may do good.

Cremation.—The number of persons who agree with the principle of cremating the dead grows greater every year.

Instead of consigning every corpse to the ground, there to lie and decompose in a wooden coffin, and perhaps to contaminate the underground watercourses and spread disease among the living, many thoughtful people to-day prefer to destroy the lifeless clay by fire, and thus to purify it and render it harmless to the living. Every dead body sooner or later becomes dust; cremation only brings about the same process in a quick, cleanly way, and the furnace destroys at the same time the teeming myriads of disease germs which exist in nearly every corpse. Cremation is done, too, without the smallest sacrifice of sentiment or decency, and we may well hope that in coming years the public at large will become so educated, so intolerant of the foulness of disease and putrefaction, that they will gladly submit the bodies of their loved ones to purification by fire, and leave instructions in their wills that their own bodies may also be thus cleansed and rendered harmless.

Cretinism is a medical word which is applied to a state of stunted growth, both mental and physical, due to the absence of a soft gland called the thyroid gland, which is situated under the skin and muscles, across the lower part of the neck and windpipe, and which does lie there in everybody except cretins. Cretinism is common in certain districts. The cretin may live to be a good age, and is often good-tempered, quiet and fat. The skin is dry and rough, the face is vacant looking, the hair stubbly, the hands short and spade-shaped, and there are bosses of fat just over the collar bones. These poor creatures often improve under medical treatment.

If the thyroid gland wastes away in an adult, the adult will generally become cretinoid, but his state is called myxædema; and he also is susceptible of being improved up to a certain point by giving him extract of thyroid gland. But though in both these conditions it is not difficult to improve the body, it is very hard to restore or improve the mind.

Croup.—This word, unfortunately in common use among the poor, *ought not to be used*, because it has been made to mean so many different ailments. Child crowing (which see) has been also called false croup. The name “false” ought to be reserved for spasmodic inflammatory laryngitis, or inflammation of the voice box, which is accompanied by noisy breathing. The word *croup* itself means

“a noise in the windpipe.” The right use of these names is as follows:—

False croup is an inflammation of the larynx, accompanied by a hoarse noisy cough and difficulty of breathing; such indrawing of the breath being accompanied by a cooing or crowing noise. If the child is left alone the spasm will probably pass off, and on waking the child seems almost well, but hoarse. Attacks may occur again on subsequent nights. The medical names are spasmodic laryngitis and inflammatory croup.

Membranous croup is probably always genuine diphtheria of the larynx and the disease only resembles the other kinds of croup in the shortness of breath and a noisy cough. This is also called true croup.

Spasmodic croup is described under the heading of “Child Crowing” (which *see*). It is purely a nervous disease and there is no inflammation about it. Mothers sometimes call the attacks “passion fits” and “holding the breath.” It is apt to occur during teething. Its medical name is laryngismus stridulus.

If there is the slightest suspicion that an attack of croup is true croup or diphtheria a physician should be called *immediately*, for in these cases if diphtheria antitoxin can be administered early death rarely occurs. If the administration of antitoxin is delayed several days the chances of death are about one in ten, while if no antitoxin is administered the chances of death are much greater.

In any case of suspected croup look for a white diphtheritic membrane on the tonsils, pharynx or in the nose. Sometimes the membrane is in the larynx and is then invisible to the unaided eye.

Cut throat.—A throat may be cut by a murderer or by a suicide. Death may follow from loss of blood if the large blood vessels in the neck are severed; but a wound of the windpipe is not necessarily fatal. If a case is seen when no skilled assistance is at hand, it is probably best to leave the case alone and the fainting which follows is the best thing that can happen to check the flow of blood. Send for a doctor and a policeman at once.

Deafness.—Do not be misled into seeking temporary remedies for deafness. Remember that it is a sign, a symptom, and not a disease. You must first try to discover which part of the hearing apparatus is in fault, and then direct

your attention to remedying the fault if possible (*see also* "Ear Diseases"). In most cases, at the outset, and in an early stage of deafness without pain, you may syringe out the ear with a glass syringe (or, better still, an india rubber enema syringe), and a lotion made of a teaspoonful of baking soda in half a pint of warm water. Continue until all "wax" and dirt and dried discharge have been washed away. Dry with a towel, and *not* by poking in a piece of cotton-wool on the end of a hairpin! If there be still some wax, leave a bit of cotton-wool soaked in a very strong soda solution, in the ear for a few hours; then squirt again. If the ear is too tender to allow this to be done properly, put a poultice on the side of the head; or, better still, a hot onion (*see* "Poultices"). If now the deafness is not gone, it must be caused by catarrh, which makes the mucous membrane lining the whole hearing apparatus swollen and hot, and interferes in several ways with hearing. There is no "certain cure" for this catarrh; there is no "cure" at all, really. You cannot learn too soon that a catarrh is only the local sign of a general constitutional weakness. You may apply douches, ointments, gargles, drops, etc., as much as you like, and they are all useful to relieve the discomfort; but they *will not cure*. A nasal catarrh, like every other catarrh, must be cured by improving the bodily health, and specially by change of air. You must call the doctor in to prescribe lotions, douches and drops that may be necessary to your special case; but you, yourself, must see to the cure. You must live in a well-ventilated house; must have the window open at night; must dress lightly but warmly and use no such unwholesome clothes as eider-downs and the furs of dead animals. You must eat all you are able to, chewing the food well. You must rest in bed enough; you must indulge in no bad habits (*see* "Hygienic Misdemeanors"), and take no unnecessary stimulants. Little by little, as time goes on, your general health will improve and your liability to catarrhs will be conquered, and you need spend no more on deaf-curing institutes or medicines. If your weakness is hereditary so much the worse for you, and the harder you must fight, and the less dissipation you can afford. But catarrhal deafness is not to be cured by medicines (though, of course, good medical advice and treatment are necessary to help you on your way), but by living hygienically and wholesomely.

Death, Sudden.—We are not going to say anything about death which occurs suddenly as the result of an injury or an accident. We are referring only to sudden, unforeseen death occurring in a person whom we had supposed to be in no immediate danger of dying at all.

No one dies suddenly, apart from the effects of violence, as long as all his organs are sound. But there are diseases which develop slowly and secretly, without letting the patient know of their existence by pain or feeling of illness. Not absolutely without signs, we mean; but without signs enough to alarm the patient, though his doctor may know at a glance that he is liable to die suddenly. For example, a man with advanced disease of his blood vessels may only complain occasionally of a little indigestion, or flushing, or shortness of breath. A man with diabetes eats heartily, sleeps well, and is cheerful, but he may die to-morrow all the same. One cause of sudden, unforeseen death is fatty heart, probably caused by the patient's own faulty mode of life, or indulgence in alcohol. Another cause is valvular heart disease which may exist for years, and only kill when the poor overworked heart is suddenly overtaxed. Another cause is the dreadful angina pectoris, or breast pang—a sudden, terrific pain at the heart, a sense of impending death—and then sudden death, or absolute recovery. Some people have three or four attacks of real angina before one carries them off. This is not the same as the acute attacks of heart pain that so many hysterical females complain of. Those are often due to *wind in the stomach*, and do not cause death! The bursting of an aneurism, or blood tumor, occasionally causes death—unforeseen, because aneurisms occasionally exist quite unsuspected, especially in robust and hard-working mechanical laborers.

Another set of causes is connected with the brain, and are such as tumors of the brain, and bleeding into the head, between the brain and the skull. People with epilepsy sometimes die suddenly in a fit. In the Reign of Terror, and doubtless occasionally since also, death has occurred from emotion—terror, rage, or despair, and even joy. Tight-lacing has caused sudden death. Then there are deaths from sunstroke; a great many people die every year in New York from that cause. Some even die of heat stroke in the depths of a shady wood, or while watching a great house on fire. In Russia cold kills about 700 people

every year. A few children die every year, with suddenness, as the result of tobacco smoking. Very stout people are apt to die of sudden heart failure, especially during exercise after over-eating, or while walking up a hill. Anæmic girls, who are so often the victims of the indigestion due to ulcer of the stomach, sometimes die suddenly. This is due to the shock caused by the ulcer perforating through the stomach wall and the food escaping into the cavity of the belly; where it soon sets up peritonitis. Persons with gastric ulcer go about in hourly danger of this peritonitis, and this complaint ought, therefore, never to be neglected.

Delirium Tremens.—**DRINK MADNESS.**—In the career of the moderate drinker there is sometimes an occasional debauch. The excess is taken, the intoxication is passed through, the long sleep that follows allows nature to recover somewhat, and only a little indigestion remains, or perhaps not even that. This is melancholy enough, seen as a spectacle of human weakness; but we are accustomed to think that “there is not much harm done.” In the case of an habitual drinker to excess things are different. A temporary excess in his case is very likely to bring on what is called drink madness, or delirium tremens. Any accident, fall, shock, or an acute inflammation may bring on this serious condition. The man is restless, irritable, and cannot sleep; so he flies to alcohol to calm him—in pain. He begins to talk incessantly, and to fidget about, or rush violently from place to place. His talking becomes muttering, his muttering grows incoherent. He has horrid visions—rats, snakes, and crawling reptiles glide about his bed, and he hears the roars of devouring beasts, and the voices of enemies conspiring to kill him. He attempts to jump out of the window. He cannot sleep, he trembles, cries, groans and raves, and will not eat or drink.

On the third or fourth day he dies of exhaustion, unless he has been properly treated, in which case the restlessness abates, sleep at last comes to his rescue, and he improves until he is cured. For a time he has been thoroughly frightened. He realizes his weakness and sin, and perhaps rushes to sign the pledge. Unfortunately, the drinking habit, once fully established, is rarely abandoned. But every man must decide for himself. If he cannot drink

moderately, without occasional excess, let him be manly enough to abstain altogether. The golden mean is only for the strong and self-respecting.

Treatment.—Even in the mildest case the patient must be treated as insane for the time being, and the doctor will consider it his duty to impress upon the friends that the sick man cannot be trusted out of sight for a moment. He has horrid delusions, and at any moment he may commit suicide, or murder. His room ought to be in darkness, and he in bed. To nurse him will require great courage and great tact, so as not to increase the struggles. It is a good plan to put a sheet across him and tie down the corners and tuck in the ends. Strong soups, jellies, beef essences, and plenty of milk must be administered as often as the patient will take them. It may be necessary to feed him forcibly through a tube.

We shall advise no drugs. Sometimes drug after drug is given to produce sleep and no sleep comes, and afterwards the drugs, which have been lying undigested in the body, suddenly take effect and poison the patient afresh. Only a doctor can know whether or not to give drugs and when to do so.

Dental Hygiene.—The importance of taking care of the teeth and preventing their decay is appreciated when we realize that in a recent survey of school children 97 per cent. of the boys and girls were found to have teeth in a diseased condition. This means that all through their lives—unless their teeth are filled or replaced by false ones—they will be unable to chew their food properly, will suffer from indigestion and malnutrition, and every time they swallow they will swallow disease germs which lurk in the dirty cavities of diseased teeth. The result will be a constant low grade poisoning which will do much to impair their health efficiency and happiness in after life.

This being the case what precautionary measures can be taken to avoid having the teeth become diseased?

The teeth ought to be brushed after every meal. If this cannot always be done we should at least take great care to clean them just before bedtime and before breakfast.

The teeth should be brushed up and down as well as crossways. The backs should be brushed as well as the fronts. It is well after cleaning to draw a silk thread in

and out between the teeth to take away any bits of food which may have caught there and which will ferment if allowed to remain.

Tooth powder is of service in keeping the teeth clean; but none but alkaline tooth powders should ever be used, as acids spoil the teeth.

Every morning and evening an alkaline mouth wash should be used. A good example of such a mouth wash is alkalol, or the official *Liquor Antisepticus Alkalinus*.

Once every six months the teeth should be cleaned by a dentist in order that *tartar* which collects about the bases of the teeth can be removed.

Offensive breath usually comes from decaying food particles which are allowed to remain between and about the teeth.

A good inexpensive tooth powder may be made up by your druggist as follows:—

Bicarbonate of soda, $\frac{1}{2}$ ounce; precipitated chalk, 2 ounces; pulverized orris root, 1 ounce; pulverized Castile soap, 1 ounce. Flavor with peppermint or wintergreen.

A dirty mouth full of disease germs is not only dangerous to the owner, but to his associates as well, for every spray from such a mouth in coughing, sneezing, or even talking or reading, is laden with microbes which vitiate the air to be breathed by others.

Do not forget that nature's method of brushing the teeth is by chewing foods having considerable firmness of consistency.

This is the reason why the teeth of dogs and bears are usually in such good condition.

Therefore it is well to include in one's dietary foods which must be chewed to be swallowed, and then to be sure to chew them sufficiently before they are passed on to the stomach for digestion.

Diabetes.—There are two forms of diabetes, distinct diseases, but both characterized by the daily passage of too large a quantity of urine. *Diabetes insipidus* is a nervous disease, chiefly of children, who suffer from intense thirst and an excessive amount of urine, which, however, contains nothing unusual.

Diabetes Mellitus is much more common. The symptoms of it are these:—

(1) Loss of weight and increase of weakness.

(2) Continual thirst.

(3) Frequent desire to pass water and the passage of large quantities of it every day. The normal person *passes about 3 pints a day* (see “Urine Troubles”), but the diabetic passes as much as 20 or 30 pints a day sometimes.

(4) The urine is sweet (it contains grape-sugar), very pale in color, is irritating to the private parts, and often causes itching and skin eruptions.

(5) The appetite is sometimes enormous.

(6) The breath often smells sweet, as of apples.

(7) Skin eruptions of all kinds, especially eczemas, are common.

(8) Indigestion, decay of the teeth, dry harsh skin, are common signs.

Causes.—Disease of the pancreas (sweetbread) is considered to be one cause of the symptoms. The liver is evidently at fault, too, for the liver is the organ which deals with the starches and sugars taken in the food, and which ought to store them up (as sugar) for future use, instead of letting them escape by the urine. The *immediate causes* are not known either; too much brain work, too much worry, too much business strain may all cause an attack. Engine drivers suffer particularly from the nerve strain they experience.

There are three more or less definite types of cases of diabetes:—

(1) *Young patient*, with much sugar in the urine, with chest complications and general debility. The escape of sugar cannot be controlled much by the use of drugs or dieting, and the disease is fatal in a few *months*.

(2) *Middle-aged patient*, with sugar leakage, which can be controlled to a large extent by suitable treatment and drugs, and which may last for from two to four *years*.

(3) *Elderly patient*, in whom all the symptoms are not very severe, and who gets great benefit from medi-

cines and dieting, but who dies at last from consumption of the lungs or coma after many years.

The *complications of diabetes* may be:—

Neuritis and paralysis, various skin diseases, kidney diseases, cataract, carbuncles, collapse or coma (insensibility), gangrene (of lung, or of toes or fingers).

Coma, in diabetes, accounts for the deaths of about half the total number of patients. It may come on quite suddenly as the result of an injury, or merely of fatigue. The patient becomes collapsed, his breathing is slow, then very slow, and his breath smells sweet (as of hay or apples), and he quietly becomes unconscious and insensible and dies at last without moving. Nothing can be done when coma comes on.

Note about diabetes.—Persons who suffer from boils, eczema, carbuncles, itching of the privates, too much appetite, continual thirst, loss of sexual power or desire, ought to take a specimen of their urine to a doctor and ask him to examine it for sugar. They may have early diabetes.

Treatment of diabetes.—This consists almost entirely in suitable dieting and the use of opium as a medicine. As to the dieting we are obliged to say that no two cases of the disease do well on the same dietary. So that no diabetic patient can possibly do without a doctor. The great point about the diet is that it must contain as little as possible of either *sugar* or *starch*.

Every week of his life the patient ought to weigh himself, estimate the amount of sugar in his urine (which he can learn to do for himself), and adjust both diet and medicine from time to time in accordance with what he notices about the sugar and his own comfort in life. We can lay down no hard and fast rules; but here are two lists which may help some diabetic patient to diet himself:—

He must not eat—Potatoes, turnips, carrots, cauliflower, peas, beans, seakale, apples, pears, oranges, gooseberries, currants, plums, peaches; cornflour, bread, rice, sago, tapioca, confectionery, pastry, liver; sugar of any kind.

He may eat—Any kind of meat, game, poultry, or fish; all *green* vegetables; cheese, butter, eggs, saccharin or saxon in place of sugar; nuts. The only real difficulty is in the

matter of *bread*. Bran bread, gluten bread, toasted thin slices of baker's bread, almond cakes, cocoanut cakes, may be eaten.

The question of *drinks* must be left to the doctor; and so must that of *medicine*. Codeine (from opium) still remains the best drug to use in most cases.

Diarrhea.—Diarrhea is of frequent occurrence, and it arises from very different causes, and exists from the presence of many different diseased states. In infancy it is commonly due to improper feeding, to over-feeding with milk, or too early use of starchy foods with the milk, or to the use of bottles, tubes, and teats insufficiently cleansed, or to the use of milk food which has turned sour from staleness, or hot close weather, or from being kept in rooms with foul air. If an infant has frequent diarrhea, in the absence of all these causes, there is a danger that the child has tuberculous or consumptive disease of the bowels, which is a most dangerous ailment. In older children diarrhea is almost always set up by errors of diet, especially by unsound fruit, and unwholesome foods. In adults occasional attacks of diarrhea are also generally due to improper food, or to some gross excess in some article of diet or of drink. Impure drinking water from public courses, or from private wells, or drunk from dirty cisterns, may also produce diarrhea. The presence of many decayed teeth, causing faulty digestion, is also a fertile cause of upset bowels, with colic pains and frequent loose stools. In addition to these various reasons for the presence of diarrhea, it must be remembered that it may be due to the presence of serious organic disease or to typhoid fever. Chronic intemperance, which has partly destroyed the liver, is often accompanied by a form of diarrhea, which rapidly reduces the strength of the sufferer. Phthisis, or consumption of the lungs, in its later stages, is in many instances accelerated by very persistent and exhausting diarrhea, which is due to tuberculous ulceration in the intestines. In typhoid or enteric fever also the looseness of the bowels results from a peculiar form of ulceration in the coats of the large intestine. Acute attacks of severe diarrhea also occur, generally in autumn in this country, in an epidemic form; these are sometimes called cholera morbus.

Treatment.—When diarrhea is set up by offending matters in the bowels, it is first necessary to effect complete

removal by some simple non-irritating purgative dose, such as castor oil, or compound senna mixture, or by Epsom salts, with peppermint or ginger; and then, later, to administer sedatives and astringents, such as chalk mixture, aromatic confection, or paregoric. But if the diarrhea be due to ulcerations in the bowels the highest medical skill may be needed to keep it under control by means of more powerful medicines and special care in diet.

Here follow some formulas which if used with discretion and intelligence may be found useful:—

For Summer Diarrhea.—Bicarbonate of soda, 4 grains; rhubarb powder, $1\frac{1}{2}$ grains; cinnamon powder, 1 grain;—for one powder. A child of one year old may take this powder twice a day. A dose of castor oil with 10 drops of laudanum in it will often check diarrhea.

For Alcoholic Diarrhea.—Take a two-grain pill of capsicum every four hours.

Chronic Diarrhea.—Take a two-grain pill of acetate of lead every four hours. (See also “Diarrhea in Babies.”)

Diarrhea in Babies.—Diarrhea in babies is generally a sign of inflammation of the intestines (enteritis) caused in the first place by unsuitable food, and kept up by the want of nourishment, which follows as a matter of course. (This disease is often spoken of among the poor as “consumption of the bowels,” but need not be connected with tuberculous disease). If the mother looks at the child’s “motions” in the napkins she will see that they consist generally of masses of lumpy curd (undigested cow’s milk), rather like clots of putty in appearance, smelling badly and greenish in color. Along with the curdy mess is a little acrid greenish discharge, which the nurse is apt to suppose to be urine, but which comes really from the intestine. If opiates, soothing syrups, or vegetable astringents (such as aromatic powders) are given, the baby will probably get worse and perhaps die. The child vomits, and sinks into an exhausted state, due simply to lack of nourishment. The greatest mistake is to continue to administer cow’s milk, which the child cannot digest. Dr. Lennox Wainwright recommends in these cases a diet mainly of *albumen water*. This is made of the white of a raw egg, beaten up with

half-a-pint of water, and sweetened with sugar and milk. Alternate feeds may consist of whey (made with rennet and milk and cream). No ordinary cow's milk may be given. The only medicine required is *gray powder* in doses of half-a-grain or so, according to the baby's age.

Digestibility of various kinds of food. An ordinary dinner of soup, meat, vegetables, bread, pudding and cheese, is digested in from four to five hours. Some of the ingredients are more digestible than others. The following table gives approximately the hours required for the digestion *in the stomach* of some of the principal foods:—

| | HOURS | | HOURS |
|------------------------|------------|------------------------|-------|
| Beef, boiled | 3 | Mutton, boiled | 3 |
| “ roast | 3—4 | “ roast | 3—3½ |
| “ grilled | 4—5 | Milk | 2 |
| Cheese | 3—4 | Oysters, raw | 2 |
| Cabbage. | 3½—4 | Potatoes, boiled | 2½—3½ |
| Carrots | 3—3½ | Pork roast | 5 |
| Eggs, raw | 2 | Poultry | 2½—4 |
| “ fried or boiled | 3—3½ | Tripe | 1 |
| “ hard-boiled | 3½—4 | Turnips | 3½—4 |
| Goose, roast | 4—5 | Rice | 1—2 |
| Fish, boiled | 1½—2½ | Sago | 1—2 |
| Ham, boiled | 2—3 | Tapioca | 1—2 |
| Lamb | 2½ | Wheat Bread | 3—4 |
| Apples | 3—4 hours. | | |

Diphtheria.—This is a disease in which there is inflammation of the throat chiefly, but also, sometimes, of the lining of the nose and air passages. What is called a “false membrane” is formed on the parts affected. This is a whitish, tough substance, which covers a red, inflamed and tender place. The disease does not begin, as a rule, suddenly, but the sufferer complains of a bad sore throat, and tenderness and swelling at the angle of the jaw, headache, and sickness. He is feverish and ill, and so powerful is the poison of the disease, caused by a germ called the *bacillus* of diphtheria, that the sick child (it is very often a child under twelve years) becomes rapidly exhausted, and may die suddenly of heart failure, or of suffocation. This disease is contagious, especially if one comes in contact with the sneezes or coughed-up phlegm of the child.

A child with diphtheria gets rapidly worse, coughs,

tosses restlessly in bed, gasps and wheezes. *A doctor must be called at once.* If he is called as soon as there is a sore throat, he will inject a substance called *antitoxin*, which will soon cure the disease. Diphtheria is too serious a matter for any amateur doctoring, and so we shall say nothing about the treatment of it. But it is important that the reader should know how serious may be the complications and sequels of the disease.

First of all, a child with diphtheria of the throat and air tubes may be suffocated at any moment, and a doctor must be on the alert ready at any time to perform *tracheotomy*, that is, to make an opening in the windpipe for the patient to breathe through. Secondly, the child's pulse must be carefully watched by the doctor in order to stave off exhaustion, or else he may die suddenly. Thirdly, pleurisy or pneumonia may develop. Fourthly, a few days, or even weeks, after apparent recovery, the child may begin to talk through his nose, and to choke over his food. These signs are caused by *paralysis* of the palate of the mouth, due to the diphtheritic poison. He may also squint, or become weak in the legs. He may even die of paralysis of the heart. Generally, however, he recovers in a few weeks.

The chief things to remember in these cases are, to be careful not to catch the breath of the patient; to nurse him in a room empty of everything except really necessary furniture; to hang a sheet wetted with carbolic acid over the room door; to use plenty of disinfectants; to give the child no toys or books that cannot be *burnt* afterwards; and to keep everyone out of the room except the nurse and the doctor.

Dipsomania.—This is a form of drunkenness in which the drunkard drinks to excess in bouts, or paroxysms, and then goes for some time without drinking at all. During the attack the dipsomaniac drinks because he has a craving to do so, which he has no strength to resist (and, perhaps, in some cases, no desire either); and in the intervals he does not drink because he suffers from remorse, and has been made thoroughly ill besides; and, perhaps, because the craving is absent, and he has lost for the time all desire for alcohol. When the end of the period of abstinence is over the craving comes back again, and, if

he has any moral courage left, he will fight against the desire until either he or the demon is conquered. But indulgence in alcohol weakens everyone's moral nature, and, by-and-bye, he cannot resist drinking, even though he may wish to do so with all his unhappy soul. This is one of the laws of the disease of drunkenness—the fact that the craving is periodical. It is easy for people to fancy that if a dipsomaniac can stop for six weeks he could easily stop during the seventh also, if he liked. It is not the case. Just as in ague or malaria, the attacks come on more or less regularly, and leave the patient fairly well between times, so in dipsomania, when the craving comes he falls into the slavery—he becomes again a victim to the poisonous drug habit, and is no more free than the sufferer from ague is.

Now, from what has been said, it will be seen that to cure drunkenness, two things are necessary—one, to stop the supply of alcoholic poison, which weakens the moral and physical resistance against itself; and the other, to break up the rhythmic regularity of the attacks, to interfere with their periodicity. These things are what honest systems of cure aim at doing. In the intervals the drunkard is fed up and rested and encouraged, so that the ravages of the poison may be met by as strong a body as possible; and then, when the attack comes on, he is put under restraint, so that he cannot possibly obtain the poison which will ruin him, body and soul.

Disinfection.—After every case of contagious disease and advisedly after every case of infectious disease the room and fabrics in contact with the case should be disinfected. A *disinfectant* is an agent capable of destroying the infective power of infectious material.

The most effective disinfectants are *fire*, *steam* and *heat*.

These will kill anything. The most useful disinfectant for room purposes is *formaldehyde gas*.

After closing all cracks and crevices in a room by cotton, adhesive plaster or paper, one pound of unslaked lime may be put in a tin basin resting on bricks and on this is poured $\frac{1}{2}$ pint of 40% formalin. This is sufficient for 1000 cu. ft. of space. The room should remain sealed for 6–8 hours.

Formaldehyde gas may be made for this purpose.

Sulphur is frequently used, but is not as good as formaldehyde although it will destroy vermin, which formaldehyde will not do. For each 1000 cu. ft. to be disinfected 3 lbs. of sulphur are to be burned. The heat generated by burning sulphur is so great that the pan containing it should rest on bricks—not on a wooden floor directly.

These gases do not penetrate fabrics very far.

Chloride of Lime, and *trikresol* are good disinfectants for discharges from patients.

Bichloride of mercury (1-500) is useful in the disinfection of bed clothing.

Lime in the form of *whitewash* is a capital form of cheap disinfectant for country buildings and outhouses.

Among the proprietary disinfectants may be mentioned Platt's Chlorides, C. N. Disinfectant and the English Sanitas Fluid.

Dislocation generally means that the bones of a joint are displaced, and this has been done by violence of some kind. Every joint in the body is liable to be the seat of dislocation, but dislocations of the collar bone, elbow, ankle, and jaw, are most common.

The non-medical person cannot generally distinguish between a dislocation of a joint and a fracture, or breakage, of the bone. Sometimes the bone is broken and displaced also. The notable thing about most simple dislocations is that *a joint which usually moves freely has become fixed*. Of course a dislocated collar bone is an exception to this, but it may be known by a lump in an unusual situation. No one, who is not a doctor, can possibly hope to "reduce the dislocation" or put back the bone into its place without a serious risk of doing more damage to the joint. In the case of a *dislocation of the jaw* the patient's mouth is open, and he cannot close it. It may be out of joint on one or on both sides at the same time. It may occur during yawning. Nearly every dislocation is accompanied by a *sprain* and a *bruise*; so refer to the articles on those subjects.

Dosage.—When the dose of a medicine is mentioned in this book, it is a dose which would suit an adult. To find out what dose to give a child or infant, consult the following table:—

| For a Child of | Give | For example, if the Adult Dose: Be <i>One Drachm</i> ; If <i>One Ounce</i> ; (or 60 grains, or 60 minims). | |
|------------------------|------------------------------|--|-------------------------|
| Less than 1 year old | $\frac{1}{12}$ of adult dose | give 5 grains | 40 minims |
| “ “ 2 “ | $\frac{1}{8}$ of full dose | “ 7 $\frac{1}{2}$ “ | 1 drachm |
| “ “ 3 “ | $\frac{1}{6}$ “ “ | “ 10 “ | 80 minims |
| “ “ 4 “ | $\frac{1}{4}$ “ “ | “ 15 “ | 2 drachms |
| Between 4 & 7 yrs. old | $\frac{1}{3}$ “ “ | “ 20 “ | 160 minims |
| “ 7 & 14 “ | $\frac{1}{2}$ “ “ | “ 30 “ | $\frac{1}{2}$ fluid oz. |
| “ 14 & 20 “ | $\frac{2}{3}$ “ “ | “ 40 “ | 5 drs. 20 ms. |
| Above 21 years old | Full dose | | |

Drachms and Ounces.—All through this book, prescriptions for medicine will be found written in drachms and ounces. When referring to a liquid medicine the words *drachm* and *ounce* really mean *fluid drachm* and *fluid ounce*.

There are 60 grains to a drachm, 8 drachms to an ounce; and there are 60 minims to a fluid drachm and 8 fluid drachms to a fluid ounce. A minim is a measured *drop*. Now, in domestic life, these measures correspond nearly to certain familiar measures as follows:

A fluid drachm is *about* 1 teaspoonful.

A fluid ounce is *about* 2 tablespoonfuls.

A tablespoon holds about . . . half a (fluid) ounce.

A dessertspoon “ “ . . . two drachms.

A claret glass “ “ . . . four ounces.

A sherry glass “ “ . . . two ounces.

A port wine glass “ “ . . . two and half ounces.

A tumbler “ “ . . . 10 fluid ounces, or half-a-pint.

It will be easily understood that teaspoons and table-spoons and glasses vary in size, so that they are not *accurate* measures for medicines. It is always advisable to have a properly marked medicine glass in the house and to measure all medicines before giving them. Most modern teaspoons will hold as much as 85 instead of only 60 minims.

Dreams.—Dreaming is not quite a healthy condition. No one ought to dream, pleasantly or otherwise. Sleep, in fact, ought to be quite dreamless, and always is, if we live hygienically. The meaning of dreaming is this—only a part of the brain is asleep; in the remainder of it, or in certain parts of it, thoughts run riot uncontrolled by the higher centers of judgment and reason. Every mental picture seems real; probability counts for nothing; nothing is too absurd and nothing seems impossible, in dreamland. When we realize the necessary truth of these facts we see how ignorant and absurd it is to be influenced or terrified by dreams, in our waking moments. A dream is an uncontrolled fanciful riot of the lower mental faculties, and the causes of this too-light sleep may be too much mental worry, the bad habit of “thinking things out” in bed, too heavy bed clothing, excessive blood supply to the brain due to heart disease, excessive use of tobacco, which depresses the heart, tight-lacing, costiveness of the bowels, indigestion, and so on. The treatment of dreaming is the removal, as far as possible, of the cause, and not the taking of composing draughts or “night caps.” (See also “Nightmare.”)

Many young men find that they are troubled with dreams only when they sleep on the *back*. Such should tie an empty cotton reel on the back over the spine by a string round the waist, so that it will wake them and make them turn to sleep on the side. Dreamers should also avoid cigarette smoking and late suppers, and especially alcoholic drinks in the evening.

Drinking Cup.—Reliable bacteriologists who have made examinations of common drinking cups have found on them the germs of diphtheria, tuberculosis, syphilis, influenza, meningitis, pneumonia and ordinary colds.

It is now known that infantile paralysis, measles and scarlet fever can also be spread in this way, although the germs of these diseases are so small they never have been seen.

When a public drinking cup has been used by hundreds of people it is not only probable that the germs of one or more of these diseases remain on the cup, but an absolute certainty.

For this reason the use of the common drinking cup in public places is being rapidly abolished by law.

In its place one of two devices may be used:— The bubble fountain without a cup; or the individual cup which, as a folding pocket cup, may be carried about, or the paper cup which, after having once been used, can be thrown away or destroyed.

Dropsy.—This is not a disease but a symptom of many different diseases. There are several different kinds of dropsy, too, though the word is generally used by the public to refer only to swollen legs or to fluid in the abdomen. Dropsy is a collection of liquid somewhere in the body as the result of a disease. Thus when there is dropsy everywhere under the skin, it is called *anasarca*. The skin is swollen and doughy to the feel. If you press your finger into it, a dimple remains, which takes a certain time to disappear. This sign is called by doctors “pitting on pressure.” You can see *anasarca* round the ankles at bedtime, in persons who have anæmia, or heart disease, or merely a fatty weak heart, or Bright’s disease. In the morning, after a rest, the swelling is gone. Dropsy of the belly is called *ascites*. The fluid collects there as a result of some disease of the liver or gall bladder.

Dropsy of the chest is called *hydrothorax*, and occurs in heart and kidney diseases. Dropsy of the head or brain is called *hydrocephalus*, or water on the brain. Very local limited dropsical swelling, such as occurs near poisoned wounds or injured joints or “black-eyes,” is called *ædema*.

Treatment.—You have to treat the disease which caused the dropsy, and that, of course, requires the skill of a doctor.

But you have also to deal with the dropsical part. *Ædema* of the legs, for instance, must be treated by resting the leg in a horizontal position. In some cases the fluid has to be drawn off, or tapped, by the doctor, before relief can be obtained.

Drowning.—If any one of our readers should rescue a man from death by drowning, or should come across a person who is lying, apparently drowned and dead, on the shore or bank of a river, let him *send* at once for a doctor, but while the messenger is gone, there are many things that he can do.

In drowning death may be caused by suffocation, or by the shock produced by striking the head on a rock or on the bottom of the pond. The appearance of the patient

will vary accordingly. A person who has been suffocated by the water will be "black in the face," the veins of neck and arms will be swollen; and the heart beats cannot be felt. In death from shock the skin is pale, the face calm, and no water has been sucked into the lungs because no attempt at breathing has taken place. If the face and mouth of a drowning person have been under the water *two minutes* or more, there is probably no chance of his being brought back to life. In the struggles of a drowning man he draws water into his lungs and this water suffocates him. Now, there are four possible ways of dealing with a person who is apparently drowned. They all aim at "artificial respiration." The written descriptions of these methods are of little use, however, in our opinion. They can be learnt only in practical ambulance classes where "first-aid" is taught. We shall, therefore, give only a sketch of treatment, so that while the messenger is gone for the doctor the man on the spot need not be wasting valuable time.

(1) Turn the body on its face, with a rolled-up jacket under the chest, and kneel on or press the chest with the hands to force out water from the lungs. Open the mouth and put the finger in to hook out any mud or weeds that may block up the throat. Pull out the *tongue* by grasping it with a handkerchief, so that it cannot fall back and stop up the entrance to the wind-pipe. Loosen all tight clothing.

(2) Then put the body on its back, with the roll under the shoulder blades, and try to make the patient begin breathing again. This requires much patience and presence of mind; above all, don't hurry. A person can only breathe about 15 times in a minute, that is once every four seconds. If you hurry, you do no good. Be deliberate and steady and firm.

(3) Kneel down at the top of the patient's head. Lean over him and seize his arms just above the elbows. Draw the arm slowly and steadily upwards until you make them meet over the head. (This imitates the first act of taking a breath, raising the ribs, and sucking air into the lungs.) Keep the arms up while you count "one two three" and then turn them down again pressing them firmly and gently against the sides of the

chest while you count three. (This imitates the act of expiration, forcing the air out of the lungs again.)

Then repeat the process, *slowly*, deliberately, and firmly, until you see that the patient is beginning to breathe for himself.

(4) Then turn your attention to warming him. If there is someone there to help you, let him attend to that part of the business while you are doing the "artificial respiration." If blankets are obtainable, wrap the patient up in them and commence rubbing the limbs upwards in the most energetic way. Take the boots and stockings off and chafe the feet, if you have no hot-water bottle.

(5) As soon as you can get the now recovering man into a house or room, put hot bottles or hot bricks to the abdomen, feet, under the armpits and between the thighs. As soon as the patient begins to swallow his saliva, make him swallow warm brandy and water, hot coffee, or mulled wine.

Note.—*Artificial respiration must be persevered with for at least an hour, even in apparently hopeless cases.*

Once recovered and really alive, if the patient seems to want to sleep, let him. It will aid his recovery very much.

Dust.—The subject of dust became of the greatest importance to us when we came to realize what a vast amount of disease was directly attributable to it. For example in some of the dusty trades—such as grinders, 49% of all the deaths occur from consumption—largely caused by inhaled dust.

For our purposes consideration of the subject of dust is best divided into inert and living dust (bacteria); and in reference to its location, into that in the street, the home, the workshop and the public building or conveyance.

Inert dust is chiefly dangerous on account of its irritating character to the lungs,—causing an increased vulnerability to tuberculosis and other germ diseases. In New York City 305 tons of iron and steel dust are produced monthly.

Dangerous disease germs may be the sole constituent of finer dust or they may cling to the coarser inert particles.

This is the reason why exposure to dust on streets so often produces colds, catarrh, influenza, hay fever, tonsilitis, pneumonia and tuberculosis.

Solid dust particles and bacteria which we breathe in the air do not come out with the expired air, but are retained on the moist surfaces of the mucous membranes of the respiratory tract. The body ultimately finds a way to dispose of much of this, but in this process it is liable to sustain much harm.

Dust particles on the street come largely from small fragments of sand, broken fibers of plants, pollen, fine hairs, the pulverized excreta of domestic animals, ashes, fibers of clothing and other fabrics, particles of lime or plaster or soot, masses and clusters of micro-organisms.

So dirty is the air of the New York street that while in a given quantity of air there were only 34 bacteria in a private house, on the street there were 5,810.

For the removal of this street dust we are in the hands of the city street-cleaning department. (Heaven help us.) All we as individuals can do is to breathe through our noses and our handkerchiefs and put our trust in the Lord and our ballots in the box for the *other* political party at the next election.

Home dust may be diminished by filtering all incoming air through cheese cloth (if there is a proper ventilating system), and by controlling the expectoration of invalids.

To avoid the collection of dust have hard floors, with rugs which may be cleaned out of doors, few hangings, and furniture upholstered with smooth surfaced fabrics.

It must be remembered that when air enters a room the germs on dust settle.

The air passes out of the room purer but the germs remain and keep constantly collecting in larger numbers.

In cleaning, anything which stirs up this dust is undesirable. (*See Cleaning.*) The best methods are the use of the vacuum cleaner and the moist cloth,—avoiding the feather duster and the dry broom.

In the workshop the dust most to be feared is that which is produced in the course of manufacture. The dusty trades produce the greatest mortality from consumption. The remedy is to have the dust removed at its point of origin by a suction ventilator.

In factories and public places dust should be filtered out

of the air employed for ventilation. Special precautions should be taken against the scattering of bacterial dust from people by discouraging unprotected sneezing, coughing and spitting.

Floors and furnishings should be such as to gather as little dust as possible. Cleaning should be *frequently* done (at such times as when the dust has well settled) by means of vacuum cleaners, moist cloths, etc. (*See Cleaning.*)

Sunlight is one of the best agencies to take the sting out of living (bacterial) dust.

Dyspepsia (*see Indigestion*).

Ear Diseases.—Doctors speak of the “external ear,” which is the ear you see at each side of a person’s head, the “middle ear,” which is inside the head and consists of the delicate machinery of the hearing apparatus, and of the “internal ear,” which is the auditory (or hearing) nerve. The commonest disease of the external ear is eczema, which generally requires only very slight treatment (*see “Eczema”*).

Of the hearing apparatus inside the head the only diseases we need mention here are *polypus* and *catarrh*. The former requires the skill of an aural surgeon for its removal.

Catarrh of the middle ear is very common. When acute, it is a part of a bad cold in the head, which has affected the ear as well as the nose and throat. The ear-ache is intense, because behind the drum of the ear there is a little collection of matter which cannot get out. If the ear-ache is treated by poulticing, the matter bursts through the ear-drum, and comes out, and the relief is immediate. Afterwards the little hole in the ear-drum heals up and the hearing may then be as good as ever. *Do not poke anything into the ear, or you may injure the drum.* In a very severe case of ear-ache it is better to call the doctor. He will very likely order leeches to be put on over the skin at the back of the ear, and bleeding should be encouraged. Then with a fine-pointed delicate knife, he will just prick the ear-drum, and let the matter out. If the matter is allowed to break through the ear-drum by itself there is a risk that the little hole or “perforation,” will not heal and that the catarrh will become chronic.

Chronic catarrh of the ear is very difficult to get rid of. *When any ear discharge appears, go to an ear surgeon at*

once. Constant syringing may be tried, using a Higginson syringe and warm boric acid solution. If the discharge smells badly, drops of this lotion may be put into the ear at bedtime:—Sulphate of zinc and carbolic acid, of each, 5 grains, and distilled water, one ounce. Much ill-smelling discharge may mean that there is a polypus there. But all such means often fail to cure, and syringing does *not* reach the seat of the trouble. Wearing cotton-wool in the ears only pens up the foul discharge.

Some wax in the ear is quite natural, but when there is too much of it the patient gets noises and singing in the ears, deafness and sometimes giddiness. Gentle syringing with warm water is enough to dislodge the wax, but if this is unsuccessful, go to a doctor about it without delay. (*See also "Deafness."*)

Eczema.—Eczema is one of the commonest of all skin diseases and the name has been used so loosely that there is the utmost confusion in the public mind as to what is eczema and what is not, and as to what is "good for eczema" and what is not. It is a disease which has several different stages and which requires different treatment in each stage. It is a disease in which the three stages may be present at one and the same time, in the same person. The different stages can only be properly recognized by a doctor, and the right treatment can only be applied by a doctor. Not only that, but there are many cases of eczema which are incurable. All things considered, therefore, the layman who is going to treat eczema on his own responsibility and knowledge has a hard task before him; and the person who goes about asking his friends or consulting the newspapers for a "certain cure" is doomed to disappointment, because there is no such thing as a "certain cure" for eczema.

However, a little elementary knowledge of the disease will greatly help the intelligent reader and patient to give intelligent assistance to the doctor in his difficult task, so that we have decided to give a short account of this disease and its treatment, and a few medical recipes.

Eczema is a catarrh of the skin just as a cold in the head is a catarrh of the mucous lining of the nose and throat. And just as the nose "runs" with fluid discharge and has scabs when the cold is "drying up," so does the skin discharge and scab over in eczema. This more or less con-

tinual "weeping" of the skin under the dried scabs is characteristic of eczema.

Eczema *seems* to arise spontaneously, and instead of running a course, it smoulders on, sometimes better, sometimes worse. There are very many varieties of eczema, but really they are all different stages of the same process, though no two cases of eczema are exactly alike.

An attack of eczema generally begins with sensations of burning and itching; then the part gets covered with a more or less deep red blush, then little blebs form on it and you see all the signs of the catarrh of the skin—swelling, heat, redness, and pain. Then the blebs burst or are torn open by the patient's scratching, and the skin "weeps" a fluid which stiffens linen as if it were starch. After a few days the patches dry up and heal, and then probably another patch or two breaks out, until they may spread all over the body.

We have described a mild case. In worse cases the skin may become thickened and inflamed and cracked terribly; the itching may cause weeks of sleeplessness and ill-health. We have seen strong men crying with worry and irritation and want of sleep when the eczema did not *look* very bad; and we have seen them scratch madly at the itching skin until blood came, and until they became tired out with pain and nervous exhaustion, and sink to sleep for a while. Added to such terrors as these, there are sometimes extra sores and boils produced by scratching and contact with infected things. No wonder then that the doctor sometimes feels in despair about a case of eczema.

There is no part of the skin which may not be attacked by eczema. We shall refer especially only to a few of the commoner varieties of the disease.

Scalp eczema is generally red and dry and covered with crusts, and complicated with other kinds of skin disease. Wash head with soft soap and apply weak sulphur ointment.

Eczema of the ear is common and sometimes spreads right into the ear hole. Cold cream should be applied. The druggist can sell you some cheaper than you can make it.

Eczema of the palms leads to much cracking and swelling and pain and soreness of the hands; the nails often become pitted and split and discolored. Soak the hands in a calamine lotion bath for a half-hour occasionally. Keep

the parts always covered with weak sulphur ointment spread on lint.

Eczema of the bathing-drawers area.—This name explains itself. The eruption is confined to the parts which would be covered by short bathing-drawers. The crusts and swollen inflamed skin, so tender that the patient can hardly sit down, make life almost unbearable. The parts should be swathed in linen, soaked in calamine lotion, and later on dredged lightly with a powder made up of talc, 87 parts; starch, 10 parts; and salicylic acid, 3 parts.

Eczema is sometimes associated with *piles*, which must be treated by themselves (see "Piles").

Now, the causes of eczema are not well understood. Certain types of people, such as gouty people, are very liable to it; but there is no real gouty eczema, and in Germany, where there is very little gout, there is plenty of eczema. The disease is just as common among the well-fed children of the rich as among those of the poor. Breast-fed children are not less liable to it than bottle-fed.

Eczema itself is not contagious. It can nearly always be cured if a proper kind of treatment is adopted, and stuck to perseveringly for a long time; but the home-physicker has little or no chance of curing it with household remedies.

Treatment of eczema.—We know that there are certain individuals who believe that in every case of disease, especially skin disease, the "blood must be out of order," therefore, they argue, you must give a medicine to "purify the blood"; and the disease will cure itself then. Well, there is a certain *small* amount of truth in the idea, and it is worthy of a little of our consideration. A few cases of eczema may be improved by blood-purifying medicines, but in most cases *the less drugging the better*. No known medicine will benefit *every* acute case of eczema. Arsenic and antimony and opium are all useful in acute and painful cases, but these medicines being also poison must be prescribed by the doctor himself. The following items of treatment can be attended to by the patient himself:—A very simple diet, a free action of the bowels (castor oil), *no* stimulants, rest in bed with light coverings, and two-grain doses of quinine every four hours. This is the way to treat an acute inflamed attack of eczema. The doctor will add the other necessary medicines.

Now the local treatment of eczema is much more important. In applying local ointments and remedies, you must keep two rules:

- ^e (1) The strength of the remedy must be in proportion to the degree of intensity of the disease. It is hopeless to apply a strong ointment to a mild attack of eczema.
- (2) The remedies must be kept continuously applied. It is useless to smear a little ointment on occasionally.

Then, as regards the treatment itself:—

Remove all crusts and scales, after softening them with olive oil, with a piece of clean lint. Otherwise the remedies cannot get down to the mischief. The parts must *never* be washed with ordinary water, and soap must *never* go near the disease. The weeping surfaces may then be bathed with a lotion made of a soloid of boric acid dissolved in rain water, or water which has been boiled, and dried by the use of muslin bags, containing starch and boric acid powder in equal parts. Then smear some of this cold cream on a clean rag and keep it applied to the raw surfaces:—Zinc oxide powder, 6 drachms; lanolin ointment, 2 drachms; olive oil, 1 ounce; lime water, 1 ounce.

As to other ointments and preparations, you have to “feel your way” in using them. The plasteryulls invented by Professor Unna are most useful to eczema patients. They are to be cut out to the exact size of the patch of eczema. They are made of various medicinal materials. For the terrible itching, dab on the following lotion with a clean plug of cotton-wool:—Carbolic acid, 1 drachm; glycerin, 2 drachms; water, to 8 ounces. If that does not relieve the itching, perhaps the following will be better:—Lunar caustic, 15 grains; sweet spirit of niter, 1 ounce; detergent tar solution, 2 ounces. To be dabbed on with cotton-wool (never with a sponge).

For the old hard chronic patches of eczema, which will not heal or yield at all to other plasteryulls or ointments,

try sulphur plastery; and lastly the following:—Chrysarobin, 10 grains; lanolin, 1 ounce.

Lastly, do not forget that eczema is a catarrh of the skin, and so the dryer the climate the better will the patient get on.

Emetics.—An emetic is a medicine which causes vomiting. Here is a list of those most commonly in use:—

(1) Give 30 grains (about half a small teaspoonful) of sulphate of zinc in a tumblerful of *tepid* water.

(2) Or, give 10 grains of sulphate of copper dissolved in warm water.

(3) Or, give a dessertspoonful of mustard stirred up in a tumblerful of warm water.

(4) Or, copious draughts of warmed sea water.

(5) To produce vomiting in cases of bad cough, with sticky phlegm, which cannot be got rid of and makes the patient retch:—Give (to a child) a teaspoonful, and (to an adult) a tablespoonful or more, of ipecacuanha wine.

(6) When the heart is feeble and an emetic is necessary, a tablespoonful of *sal volatile* in a tumbler of water may be very useful.

(7) If far from medical aid tickle the throat with a feather.

Emetics are given (1) to children, especially those with whooping cough, to help them to get rid of the phlegm; (2) to drunkards who have “mixed drinks,” and are being poisoned with alcohol; (3) to persons who have taken poison.

(8) The stomach pump. The proper use of the regular stomach pump cannot be taught here. But in the absence of a doctor, a child who has taken poison, or who has been fed upon poisoned food, may have his stomach emptied through an *india rubber male catheter* attached to an ordinary glass ear syringe. Rub the catheter with a little oil before you slip it down the child’s throat.

Enema.—A doctor will sometimes tell you to administer an *enema* in his absence. An *enema* is an injection made with an india rubber syringe into the back passage. An

enema is generally given for the purpose of making the bowels act freely; but it may be given for other purposes, such as to apply a lotion to a sore or ulcerated surface in the rectum, such as occurs in dysentery; or to nourish the patient when he cannot take food by the mouth, because of a cancer for instance; or to stop diarrhea. An enema for making the bowels act is made of a pint of warm water and soapsuds. Another excellent way of making the bowels act is to use a little enema syringe made of vulcanite, and inject about two teaspoonfuls of glycerine. The common form of syringe used for ordinary enemas is called a "Higginson syringe." The patient ought to lie on his or her left side, with a towel or mackintosh beneath him to catch any drippings. The bone nozzle then, well oiled, should follow a well-oiled forefinger into the bowel, and be pushed upwards for one inch. Then withdraw the finger and push the nozzle backwards and upwards for another inch and a half. Then use the ball of the syringe. Many patients like to put in the nozzle for themselves. It gives no pain, and relief of the bowels is speedy.

Epilepsy.—(I.) In olden times this disease used to be called the Falling Sickness, because it consists of a series of sudden fits in which the sufferer almost always falls down, wherever he may be. A fit of epilepsy must not be confused with other attacks, such as syncope or fainting, nor with apoplexy, also called a fit. An epileptic fit or attack consists of a sudden loss of power and sense, causing a fall down, and convulsive twitchings of the muscles of the arms and legs, of the face and jaws. Every fit of convulsions is not epilepsy, for children are liable to have fits from teething, from indigestion, or when sickening for some fever or inflammation; they also have fits from spasms in the throat and windpipe. Any severe attack of convulsions occurring in a previously healthy child, man, or woman, may be of epileptic origin, but no one could be sure of this. This disease varies very much in severity, both as to the frequency of the attacks, and as to the importance of each fit. Some sufferers have several fits in a day, others may have only one fit in a month or in a year. A fit may come on suddenly, and last only a moment, or it may cause a sudden fall, deep insensibility, general convulsions, gnashing of the teeth, biting of the tongue, and foam at the mouth, and may last for hours. Severe fits are fol-

lowed generally by heavy sleep and then by headache and exhaustion. In some exceptional cases the patient has some warning of the coming fit, but in most persons the attack is immediate, and the sufferer drops whatever he may be holding, and falls without any power to save himself from injury or from death. Epileptics are often burnt, drowned, and suffocated in accidental manners; therefore, never leave an epileptic alone after a fit has occurred. The great mystery about the disease is that although from the symptoms we know that the brain and spinal cord must be affected, yet after death sometimes *no* fault can be found in them; and at other times faults are seen which may or may not account for the fits during life. Sometimes surgeons discover neither brain injury, nor tumor, nor bleeding, nor abscess. When there have been several epileptic fits the disease is rarely cured, or recovered from. Slight fits often lead to more serious mind failure than severe convulsions, and often end in madness. Epileptics should not marry, nor have families, for their disease is very apt to reappear in their offspring.

(II.) What to do with epileptics is a very difficult problem, for being never safe from attacks of the disease they are dangerous to have as servants in private houses, and are not safe as workers in factories, nor in the Army or Navy. Farm colonies have been instituted, and perhaps such sufferers are more safe in the fields than anywhere else.

Epileptics have often bad tempers, and are passionate and revengeful, while many are almost imbecile. A considerable number of murders are done every year by epileptics, after recovering from a seizure, their mad violence being a sudden short outbreak, which soon passes off, and may leave them quiet and reasonable, and sometimes quite forgetful and unconscious of what they have done. Heredity seems to be the most frequent origin of this ailment, and the next most frequent cause is *intemperance* or madness in the parent. True epilepsy is not started by injuries, nor by the drunken habits of the person himself. When anyone has had a series of fits, he or she rarely loses them entirely, however treated by medicines, food, or diet. Almost every known drug, vegetable, mineral, or animal, has been given for this disease, and more than a hundred have at some time or other gained some reputation as curatives; but it is sad to have to say that there is but one

which produces any definite improvement by making the fits less severe, and the intervals between them of longer duration. This drug is bromine, which, however, cannot be given with advantage in its pure state; it is a deep reddish-brown pungent liquid, obtainable from seaweed. In medicine it is used combined with alkalies, and its most usual preparations are bromide of potassium, bromide of sodium, and of ammonium. A fourth form is a clear, colorless, sour liquid, named hydrobromic acid. Bromide of potassium has been most used, beginning with doses of five grains for adults, and afterwards much increased. It is a drug with a calmative effect, but taken continually it is very depressing, and it is not wise to take it except under medical care. Arsenic was once a common remedy, and so was nitrate of silver; solutions of salts of gold have been tried, and now disused. Epilepsy is eminently a disease for being *periodically* seen by a doctor, who will watch the course of the treatment, and decide as to its success.

(III.) As to the treatment of these fits of epilepsy, apart from medicines, we must say that neither a purely flesh nor an entirely vegetable diet will remove the tendency to these fits, nor will total abstinence. The use of tobacco does not seem to have any curative effect, nor does it seem to make the disease any worse. Epileptic fits are attacks of convulsive spasms of the voluntary muscles. These muscles are governed by impulses sent from the brain and spinal cord through the nerves, and these spasmodic jerkings are involuntary in onset, and cannot at all be checked by the strongest effort of will. In severe fits, there being temporary loss of the senses, of course the human will has no chance of controlling the spasms. The disease called hysteria, which occurs chiefly in nervous and delicate young women, will sometimes give rise to fits which imitate an epileptic seizure; but the history of the case, and the fact that there is an absolute insensibility, serve to distinguish the two ailments. An epileptic never gives more than one cry in a fit at the onset, whereas the hysterical girl will keep up a noisy disturbance of mixed crying, screaming, and often laughter of a mad sort. In the hysterical fit also the tongue is not bitten, nor is there foaming at the mouth. The actual epileptic fit cannot be stopped until it has run its course, except by means of chloroform or ether, and this administration would, under the circumstances,

be almost as dangerous as the fit itself. The most important thing to be done for a fit is to prevent the patient from self-injury, and from wounds and bruises from knocking himself on the floor or against furniture. In any case where there is gnashing of the teeth, it is a good plan to put a firm, but soft plug of cork, or some similar material between the jaws; otherwise the tongue may be sadly bitten. Persons who live in the same dwelling with an epileptic should run to his assistance when any cry or moan is heard, and the patient should be laid, if possible, on the floor on a rug; or if put on a bed or sofa, he must be prevented from falling. In general, no medicine can be given during a fit, but in some very severe and long attacks an anæsthetic, such as ether, chloroform, or nitrous gas, may be administered by a doctor.

Erysipelas.—This disease is less common than it used to be, and the reason is that our sanitary arrangements are much more perfect than they were.

Where there are defects of drainage, broken sewers, cess-pits near houses, or worse still near wells, or where sewer gas enters dwelling houses, there erysipelas used to be rife. It was also a common disease in the surgical wards of our hospitals before that famous surgeon, Lord Lister, introduced the antiseptic mode of treating wounds.

Erysipelas may attack patients suffering from wounds, or it may appear in a person who is otherwise out of health, sickly, or of broken-down constitution. In either case the true cause appears to be a special disease germ floating about the air of a place. It used to be called a miasmatic disorder, and by miasm was meant impure air—air poisoned by exhalations from diseased persons, or from many wounds, or from decaying animal matter. This was before the time when the microscope became powerful enough to discover very minute bacilli, bacteria, and microbes. This disease is sometimes epidemic—that is, affecting a great number of persons at once; or it may be sporadic—that is to say, occurring in solitary cases.

Erysipelas is always contagious, and although medical men and nurses but rarely catch it when attending cases, yet sickly people, or persons with open wounds, or with ulcerated throats, often take the disease.

Erysipelas is an inflammatory fever of a severe type, associated with painful redness and swelling of some part

of the skin, and often of the face and head. The affected skin becomes pink, then more and more red, and livid in tint; it is puffy and tender, and the patch tends to spread. It may attack the edges of an unhealthy wound, or any old ulcer. The first symptoms are believed to appear about six days after taking the infection; then there are chilliness, shivering, and fever, headache, dryness of tongue, much discomfort, and then the inflammation is found coming out on some patch of skin, with pain and redness. If the face is attacked, the swelling may be so great that the features are hidden. Nausea, vomiting, and diarrhea are common. Death may follow from exhaustion, from blood poisoning, or from the disease attacking the windpipe, or from its spreading inward to the brain.

As soon as the disease is discovered, the patient must be put to bed and have a sharp purgative, and should have no solid food. Some doctors apply poultices to the red patches, while others prefer only dry applications, such as starch, flour, or rice powder.

The perchloride of iron is generally prescribed by the doctor in these cases. It is *almost* a "certain cure." Fifteen-drop doses of the liquor are taken with advantage by some adults. French surgeons rub in a lotion of perchloride of iron, 30 per cent., with a lint swab, locally. But most cases get well if the part is merely covered with a mixture of equal parts of boric acid and flour, and the strength of the patient kept up with iron tonics and stimulants.

Exercise and Recreation.—The most important factors in the maintenance of health are the avoidance of infection,—the use by the body of pure fuel (food, drink, and air)—and the maintenance by the body of a high degree of resistance to disease. Among the last means of health preservation few are more important than exercise.

The main effect of exercise on the body is to increase oxidation. It increases the rapidity of the circulation everywhere and therefore causes in all organs a quicker renewal of plasma, and a more effective removal of the waste products of tissue combustion.

No man can continue healthy without exercise in some form. Physical health requires bodily exercise. Mental health requires recreation.

Though, as is the case with food and drink, some people

require more exercise than others, yet the complete avoidance of it results in digestive and nervous disturbances, loss of vigor, and, if continued, in organic degeneration and disease.

The form of exercise must vary with the habits, time, strength, means and requirements of the individual.

The best form of exercise is that which is at the same time recreation.

This is especially the case with children. Boys must find amusement in their exercise and it is preferable if obtained in the form of games with other boys. For this reason the best exercise for boys is that obtained by playing such games as the following:—baseball, football, tennis, cricket, lacrosse, hockey, handball and badminton.

For girls: basket ball, skipping the rope, tennis, golf, prisoner's base, head-on and the folk-dances and games are good.

For adults the following are recommended:—Walking, which is an exercise available to all, is of little benefit unless the walk is fast and far. Running is good exercise if not carried to the point of exhaustion.

Horseback riding is one of the best forms of exercise, calling into play all the muscles of the body, shaking up the organs and maintaining the interest of the rider. Polo is the king of exercises, but available to few on account of its expense.

The games baseball, football, cricket and lacrosse are good games for the young adult.

Bicycling, rowing, boxing, wrestling, and fencing are good sports and capital exercise.

There are few better forms of exercise for the nimble adult than hockey, squash and handball. For the man of middle age the best exercises are bicycling, horseback riding, tennis, golf, swimming and badminton. All exercise should be taken in the open air if possible. If this is impossible recourse may be had to chest-weights, dumb-bells, Indian clubs and the army setting-up exercises.

For those who are unable to indulge in such active exercise, or those who require a little more of the intellectual element in their exercise, the following are healthy forms of recreation:—Gardening, camping, yachting and boating, botanizing, collecting of animals, birds, fish, butter-

flies, insects, etc.—field work in archeology, ethnology, paleontology, etc.

Intellectual stimulation on one hand, enjoyment of the beauties of nature on the other hand ought to fill out the time of recreation of every cultured person.

Those whose calling compels them to undergo bodily exertion and exercise in the open air should rest the body during their leisure hours, and should seek recreation particularly in intellectual stimulation, viz., in enlightened discussion, in reading useful books, in contemplation of works of art or in the enjoyment of good music. On the other hand, he who is mentally occupied, and must spend his hours of work standing or sitting in closed rooms, should seek action for his body in his leisure hours by suitable bodily exercise.

Social intercourse also affords congenial recreation not injurious to health when confined within proper limits.

The exchange of thoughts with other people stimulates the mind advantageously; the communication of our feelings and experiences is a necessity for most people and requires social conversation as well as proper interest in the pursuits of our fellow-men.

There is a tendency to mental atrophy nowadays through taking our intellectual amusements in a predigested form—as in the case of many of the present day theatrical performances of little merit. A brain should be very tired before it should be asked to be content with diversions of such doubtful benefit.

Eye Diseases.—Before learning anything about the diseases of the eye, it is desirable for you to know the proper names of some of the parts of the eye. The “white” of the eye is properly called the *conjunctiva*; the colored part is the *iris*, and the dark center of the eye is the *pupil*. The pupil is really an opening in the eyeball, which allows rays of light to pass into the eye in order to reach the back of the eyeball where the optic nerve (the nerve you see with) is spread out in a delicate layer called the *retina*. If you look at your own eye in the looking glass, with a strong light, you will see that the pupil is very small. This is because the rays of light are strong and you don’t need many of them to see with. If you look at your eye in the glass in a bad light, you will see that the pupil is much larger—it has dilated, in fact. So you see that the iris

is really a movable circular curtain, which can open and close in order to allow as much light to pass into the eye at any moment as is necessary for sight. The pupil is the entrance for all rays of light, and it is protected from the air by a transparent covering called the *cornea*. The cornea is the glass window of the pupil, so to speak, and just behind it, and behind the iris, is the *lens* which collects the rays of light and focuses them on the retina.

Diseases of the Eye.—(1) The cornea is very liable to ulceration and inflammation. An inflamed eye cannot bear the light. Such trouble as this is fairly common in children after measles. All the forms of inflammation are roughly classed together under the heading *ophthalmia* (see below), and the signs are redness, wateriness, pain, and dislike of light. Make the child wear a green shade over the eyes. Put a little yellow oxide of mercury ointment between the eyelids twice a day. Feed the child up.

(2) A more serious form of *ophthalmia* is the ulceration of the cornea, caused by tuberculous disease. A doctor must be called in.

(3) An ulcer or sore on the eyeball coming from a slight injury such as the scratch of a twig or a person's fingers may be very serious indeed. A doctor must be called in to treat it.

(4) Children with inherited syphilis are very liable to cloudiness of the cornea. (See also "Syphilis.") The front of the eye in these cases gets to look like ground glass and then seldom improves.

(5) "Catarrhal Ophthalmia."—This is a very bad "cold in the eye." The eyes feel as if they had "grit" in them; the conjunctivas are bloodshot, the eyelids are stuck together in the morning; work is unbearable, because the eyes cannot bear light. This *ophthalmia* is sometimes epidemic, generally in the springtime, and affects people of all ages and both sexes. The attack lasts about a fortnight.

Treatment.—Use zinc sulphate lotion, two grains to the ounce, several times a day. Apply yellow oxide of mercury ointment, four grains to the ounce of vaseline, between the lids at bedtime; wear a green eye shade.

(6) "Gonorrheal Ophthalmia."—This disease is caused by bringing the pus of the venereal disease called Gonorrhea to the eye by the finger. It is a terrible disease and often ends in blindness. Thousands of children are blind

or have defective vision because their mothers have suffered from Gonorrhœa. The treatment cannot be carried out without a doctor.

(7) "Granular Lids."—This name speaks for itself. Among the poor it is very common to see eyelids which are sore at the edges and seem to have been dusted over with fine granules of sand. This disease, whether treated or not, as a rule drags on its course for months or even years, and the lids may become scarred and contracted, and the eyelashes may grow inwards. Ulcers of the conjunctiva are common then, and the sight is damaged.

(8) "Watery Eyes."—All day long, whenever you blink, a tear comes out of the little tear gland lying at the outer corner of the eye, and is washed across the eyeball, and escapes down a little tube, the opening of which you can see at the inner corner of the eye next the nose. This little tube is called the tear-duct and leads down into the nose. If the eye were not washed continually like that, it would suffer from the grit and dust which are always floating about in the air. Sometimes people get a "cold" or "catarrh" in the tear-duct, and it gets more or less stopped up for a time. So the tears cannot escape, and remain and make the eyes "watery," especially in windy weather. If this does not get better in a few days, a sort of *stricture* of the tear-duct may develop, and then a little operation will be necessary.

(9) "Errors of Vision."—If you cannot see as well as other people, and if you value your sight, do not go to the ordinary jeweler's shop, or even to the ordinary optician's, or spectacle-seller's shop, but have your eyes properly examined by an *oculist*, and he will tell you not only whether you require glasses but exactly what glasses are necessary to correct your sight. It is a little more expensive, perhaps, to consult an oculist than an optician, but the advice and recipe for glasses once given, you will probably not need to consult him again; and the eyesight is really far too precious to trust to the tender mercies of a man who merely wants to sell glasses, and knows nothing of eye diseases. (The spectacle makers are, we believe, to be instructed in the future in the elements of the treatment of errors of vision by means of spectacles. This will be a real advantage to a large section of the public.) In middle-aged persons the power of the eyes, to accommodate

themselves to all kinds of vision, sizes of print, distances, etc., etc., is gradually growing less. At from forty to forty-five years, even persons with ordinary sight begin to require glasses. At forty-five a person with ordinary good sight will require glasses, called *plus-one-dioptre* in order to see to read; at fifty he will require *two-dioptre* glasses; at fifty-five, *three-dioptre* glasses, and so on for every five years up to sixty or sixty-five. A person who has always been "long-sighted" will need glasses for near vision sooner than others. Short-sighted people will not need glasses for near vision until they are quite old.

Fainting.—When a person faints lay him on his back, loosen the clothes round the neck and round the waist, and, if the person be a tight-laced woman, cut her stay-laces. Then, if in a moment or two the patient does not recover, throw cold water on the face or put smelling-salts to the nostrils.

Fever.—Fever is an abnormal condition of the body characterized by elevated temperature, quickened respiration and circulation, faulty secretions and increased tissue waste; and dependent upon a perversion of the physiological processes which usually so balance the generation and loss of heat that a uniform normal temperature is maintained (98.6° F.).

Fever is caused by—(1) Local inflammations excited by external causes, or the products of faulty metabolism (gout, rheumatism).

(2) The presence in the body of microörganisms, or of toxins produced by them, as in typhoid fever, pyæmia, diphtheria, malaria, etc. (3) Paralysis of heat-center, as in thermic fever.

The only exact way of determining the degree of fever is by the use of the clinical thermometer. This may be inserted in the mouth under the tongue, under the armpit, or in the rectum (the last method being the one always employed with babies). A fever between normal or 98.6° and 101° is considered slight; 101° to 104° moderately to decidedly high, 104° to 106° very high; and above 106° *hyperpyretic* and exceedingly dangerous.

Before beginning to treat a fever it is best, if possible, to understand the cause. Then the *specific* treatment for that special form of fever can be employed if there is one.

In addition to the specific treatment there is a general

| Names. | Incuba- tion. | Day of Rash. | Character of Rash. | Rash Fades. | Duration. | Period of Quarantine After an Attack. |
|---|-------------------|---------------------|---|---|------------------|--|
| Measles. <i>Rubeola.</i> | Days. 10 to 14 | Days. 3rd or 4th | Small red dots, resembling flea-bites, first appearing on temples and forehead. | On 7th day of fever. | Days. 6 to 10 | Two weeks, if all desqua- mation and cough have ceased. |
| Scarlet fever. <i>Scarlatina.</i> | 1 to 6 | 1st or 2nd | Bright scarlet, rapidly dif- fused, first on chest and upper extremities. | On 5th day of fever. | 8 to 9 | Six weeks, and then only if there is no desquamation, sore throat or discharge from ear, etc. |
| Typhus fever. <i>Ship fever.</i> | 1 to 12 | 4th to 7th | Mulberry-colored maculæ, general and abundant over abdomen, extending to extremities. | | 14 to 21 | |
| Typhoid fever. <i>Enteric fever.</i> | 10 to 14 | 7th to 9th | Rose-colored papules, few in number, limited to trunk. | | 21 to 30 | |
| Smallpox. <i>Variola.</i> | 10 to 14 | 3rd or 4th | Small, round, red, hard pimples, forming vesicles, then pustules, first ap- pearing on face and wrists. | 9th day scabs form, and about 14th day fall off. | 14 to 21 | When all scabs have fallen off. |
| Chicken pox. <i>Varicella.</i> | 4 to 14 | 1st | Small rose-colored papules, soon forming vesicles, which do not become pus- tular. | Slight scab of short duration. | 6 to 7 | When all scabs have fallen off. |
| Erysipelas. | 3 to 7 | 2nd or 3rd | Diffused redness, either of a dusky or yellowish hue with swelling. | | | |
| German measles. <i>Roseola.</i> | 6 to 10 | 1 or 2 | Rose-colored spots not ele- vated, occurring irregu- larly at different points. | From 24 to 48 hours. | | Two to three weeks. |

form of treatment of fevers, which is rarely contra-indicated, which is especially to be recommended in the early stages of all febrile diseases.

This consists of rest in bed, a cool, well-ventilated room, liquid or semi-liquid diet, a mercurial purgative such as calomel (1 or 2 grains) or blue mass, followed by a saline cathartic such as Epsom or Rochelle salts.

The elimination of the poisons causing the fever may be increased by drinking an abundance of water; by increasing perspiration and the fluid excretions by Dover's powders, ammonium acetate or sweet spirits of niter. Sponging the surface of the body with cool water, or water and alcohol, helps to diminish body temperature through evaporation. Among the drugs capable of reducing temperature may be mentioned quinine, aconite, antipyrin, phenacetin and acetanilid, but as the last three are coal-tar products, which are somewhat depressing to the heat, they should be used with caution.

As soon as a specific cause has been discovered, that cause should be removed or the specific drug called for should be administered. For example, if the cause of fever is an abscess it should be opened, cleaned and drained. If the fever is malarial, quinine should be administered; if gouty, colchicum; and if rheumatic, salicylates.

Many of the infectious fevers are characterized by a rash which develops after a more or less definite incubation period. Many of these diseases are contagious; therefore to prevent their spread they should be quarantined until all danger of their transmission has passed. The preceding table gives the duration of such a quarantine, the incubation period of the disease, the character, time of appearance and duration of the rash and the duration of the illness.

Diphtheria is usually quarantined four weeks, if convalescence be complete, and no sore throat, albuminuria or discharges remain; and bacteriological examination of the throat is on two consecutive occasions negative.

Whooping Cough is quarantined five weeks from the commencement of the whooping, if the characteristic spasmodic cough and whooping have ceased. Earlier if all cough be gone.

Mumps are quarantined three weeks, if all swelling has subsided.

Fits, and "Inward Fits."—Infants are specially liable to have what mothers call fits; some uneducated mothers say that besides real fits, babies have inward fits. By this latter name they generally mean the grimaces seen on babies' faces when they are suffering from indigestion, and have stomach-ache and wind in the stomach and bowels.

Real fits are attacks of convulsions, and the presence of convulsions is shown by violent, sudden, and involuntary twitching of the limbs, clenching of the jaws, and rolling of the eyeballs. In some cases all the muscles are affected, while in others the face only is convulsed, or the limbs only. In full-grown persons the only fits of convulsions are those due to epilepsy—a well-recognized, chronic disease, which renders a sufferer liable to convulsive attacks at uncertain intervals; and fits occurring at the close of blood poisoning from kidney disease, or resulting from an apoplexy due to bleeding on the brain. (*See "Apoplexy."*) In childhood, however, fits of convulsions are quite common, and may be fatal, without showing an epileptic constitution.

Causes:—Such fits may be started by the onset of fevers, or of inflammations of the lungs or kidneys, or by any irritation within the body, or on the skin; for example, curdled milk in the stomach, a biscuit food if given at too early an age, colic, diarrhea, ulcers, coughs, and skin diseases may all set up a series of fits; and so many slight operations, such as vaccination, or the application of caustic to a wart, or tying a thread around a birthmark, or circumcision. Convulsions or fits are dangerous to life by affecting the windpipe and so causing suffocation by spasm; convulsions of the muscles around the chest may so hinder the breathing as to cause death; and spasm of the heart leads to fainting and instant death. The occurrence of a fit may point out the presence of disordered digestion, and so lead to prompt treatment of the stomach and bowels, which, under artificial feeding by the bottle or teaspoon with cow's or goat's milk, or with condensed milk, is much more common than when an infant is suckled. When starchy foods, such as arrowroot, maizena, cornflour, baked wheat flour, or biscuit are given with milk to infants, there is always a risk of the occurrence of convulsions until a baby is six months old or older, because until that age is reached the juices of the stomach are unable to digest

starch, and the food gets into hard lumps, which do not dissolve. The cutting of teeth in infancy is the other most common cause of fits, and, because it causes so much pain and disorder to the nervous system, it is always wise to take special care of children when teething; but in any case of convulsive fits, send at once for a doctor.

Flies.—Housekeepers have for a long time considered flies as a necessary nuisance. More or less attempt has been made by many to keep them out of the house by screens or to kill them by means of fly paper, but this was done principally because they soiled the picture frames or the chandelier, or because they were annoying when they settled on the hands or face. Physicians and health officers, however, have come to the conclusion that the common, ordinary domestic fly that we have tolerated for so long, is not only one of the most disgusting and filthy things imaginable, but, what is worse, is probably *the cause of much sickness and many deaths*.

The fly is usually *born in a manure pile*. Garbage, dead animals, and refuse of all kinds is selected by the female fly as a suitable place for breeding.

The fly is not at all particular as to his food; he likes milk and cake and most all the kinds of food people eat, but he can also be seen enjoying a hearty meal off the contents of a privy vault, off the expectoration from a consumptive, the discharges from sores on animals and men, and many other equally repulsive substances.

The dirty habits of the fly ought to be enough to disgust anyone and make him a determined enemy of the pest; but, to make matters worse, the fly's liking for these repulsive things makes him a positive source of danger. The food of a fly is not served on a diminutive plate, but he steps right into it; and he not only eats all that he wants, but he gets his legs and body and wings more or less covered with whatever filth he is eating. And the filth he so often chooses contains myriads of germs of disease.

By use of the microscope it has been shown that *on a single fly there may be as many as 6,500,000 bacteria or germs*; the average number is probably about 1,250,000. These are not all disease germs, for there are bacteria that are harmless; but a few typhoid germs from a privy vault, or tubercle bacilli from a cuspidor or from an expectoration on the ground, or a small number of germs of diar-

rheal disease from the sewage-soiled bank of a stream are enough to cause fatal illness.

And some of the filth and germs on the legs of the fly are going to be deposited on the very next thing he settles on; it may be milk in the pitcher or pail, it may be the fruit or vegetables exposed for sale, it may be the bread or cake, it may be the nipple of the baby's bottle, or it may be the lips or face of the child as it lies asleep.

The many cases of typhoid fever that occurred among the American soldiers in the various camps at the time of the Spanish war were mainly due to the flies which had access both to the bowel and bladder discharge of the soldiers and to their food.

Other diseases which may be transmitted by the flies are summer diarrhea, infantile paralysis, cerebro-spinal meningitis, tuberculosis, trachoma, septicæmia, erysipelas, cholera, plague, anthrax and the intestinal parasites such as tapeworms (through contamination of food by the eggs).

The fly is more, then, than a mere nuisance; it is a *positive enemy to life and health and must be exterminated*. And everyone must join in and do his share in this work. We must all try to stop the breeding of flies, and we must all do all we can to kill those that are born and to prevent them from carrying disease.

The life cycle of the fly.—The eggs of the fly are deposited upon putrefactive animal or vegetable matter. From the eggs emerge the larvæ or maggots, which feed upon the decaying material. After a variable number of days, they shut themselves into their skin, forming a hard case (puparium) around themselves, from which they emerge, by a marvelous transformation, as winged insects. A single fly lays 120 to 140 eggs; the larvæ or maggots leave the eggs at the earliest eight hours after laying; they mature in five to eight days, then pupate; the pupæ mature in five to seven days, the cycle from egg to fly requiring at least ten days.

All stable manure and filth should be kept in a vault or pit from which flies are shut out by screens, and lime should be sprinkled freely and frequently over the contents of the pit. This will not injure the value of the manure as fertilizer, but it will stop the breeding of flies. As ninety-eight flies out of every hundred are born in a manure pile, this ought to do away with a vast number of

flies, and it is the most important measure in the war of extermination. It is well to bear in mind, too, that it takes ten days for the fly to develop from the egg; so if manure is removed about once a week and spaded into the ground, flies in process of development will be destroyed before they reach maturity.

The other places in which flies breed must also be looked after. *Garbage* should be kept in a covered receptacle, and no refuse should be allowed to collect where flies can get at it. *Dead animals* should be promptly removed and buried or burned.

Privy vaults should be so constructed as to exclude flies. Openings for ventilation, etc., should be screened with wire or mosquito netting, and all cracks in the walls or openings under the bottom should be closed.

Doors and windows of houses should be screened, especially in the kitchen and dining-room, and any room in which there is a case of sickness. And care should be taken to see that the screens fit accurately, and that they are always in place, and that screen doors are not left ajar or held open. If wire screens cannot be afforded flies can be kept out by cotton mosquito netting tacked over the windows. A piece of netting containing sixteen square yards can be bought for half-a-dollar.

Flies that do get into the house should be chased and killed, or should be caught by fly paper, etc. All dead flies should be promptly burned.

Don't buy food exposed for sale in places where flies can get to it.

Our houses are not the only places where fly screens should be used. Slaughterhouses, butcher shops, markets, candy stores, grocery stores, bakeries, and the wagons of food peddlers of all kinds—every place where any kind of food is handled or sold—should be screened. Flies should never be allowed to come in contact with anything that is to be eaten.

Fomentations are, on the whole, better than poultices. They are made with flannel or lint, or boric lint—best of all. The lint is wrung out of boiling water in which poppy heads have been soaking. To wring out warm cloths with the hands is quite impossible, if the fomentation is to be as hot as it ought to be, and in the process of wringing much heat is lost. So in every household there ought to

be a *wringer*, which is thus made:—Take a towel, or a piece of coarse towelling, or a piece of bed ticking, twelve inches wide and thirty inches long. Make a hem at each end wide enough to form a channel for a stick of about eighteen inches long. Two pieces of broomstick will do nicely. To use the wringer, put it, with the fomentation lint folded into a pad on it, in boiling water, or else pour boiling water on to it, and then seize the sticks, twist them in opposite directions so as to squeeze all superfluous water out of the fomentation. Untwist it again rapidly, seize the fomentation, smooth it out, place it on the body, cover it with a bit of oil-silk, and then a pad of cotton-wool and a bandage. Apply another fomentation before the first gets cold.

Foodstuffs Exposed to Street Dust and Dirt.—Foodstuffs exposed on the streets may become contaminated by dust (*see* “Dust”) and flies (*see* “Flies”) and consequently a source of disease when eaten in the uncooked state.

Regulations such as the following are now enforced by many boards of health and should do much to ensure the safety of our food supply.

A. The following are prohibited from being displayed for sale outside any premises or in any street or public place *unless covered so as to be protected from dirt, flies and other contamination*.

1. Pastry—bread, pies, rolls, cake.
2. Sliced fresh fruit, such as watermelon and oranges when cut open.
3. Dried or preserved fruits—dates and figs.
4. Candies or confectionery (does not include candy exposed for sale when wrapped in paper).
5. Perishable food products which are not pared, peeled or cooked before consumption, which includes: (a) Plums; (b) Berries; (c) Grapes.

B. The following shall not be hung or exposed for sale in any street or outside of any shop or store or in any open windows or doorways thereof:

1. Meat.
2. Poultry.
3. Game (except rabbits).
4. Fish.

C. The body of any animal, or any part thereof, used for human food shall not be carted or carried through the

streets unless covered so as to be protected from dust and dirt.

Gait and Appearance.—Every doctor cultivates as much as possible the faculty of *observation*. He is called in to a patient and has patiently to listen to a long rigmarole of complaints and description of illness, and he has to arrange what he has learned in a methodical way, asking questions to fill up the blanks in the information given, and at last he makes up his mind what is wrong with the patient and decides what treatment will do him good. But the clever doctor has more to do than that. He has to notice that, very often in the case of women patients, the account given is not quite truthful. Willfully or ignorantly the sick person has misrepresented or exaggerated something. So, all the time that the talking is going on, the doctor *observes* little details, and draws his conclusions far more from what he *sees* than from what he hears. When a patient approaches a doctor in his consulting room, he walks towards him, and from his very gait and appearance there may be a great deal to be learned. Sometimes it is possible to “diagnose” a disease at the first sight of a patient, just as you can diagnose a cold in the head from seeing a person with watery eyes using his handkerchief to blow his nose! Note the elastic confident tread of a man in good health; the shambling gait of the public-house loafer; the dragging of the feet in people who are tired. If a child cannot walk when it is a year and six months old, you can safely diagnose stupidity, paralysis, or rickets. A child with St. Vitus’ dance walks jerkily and oddly, and perhaps twitches with hands and face at the same time. In *paralysis agitans*, the trembling palsy seen sometimes in old age, the person totters along, getting quicker as he goes, and at last is unable to stop himself except by running against a chair or wall. His steps are all very short.

In *locomotor ataxia* the patient looks to see where he is putting his feet; he lifts his foot high in the air in order to be sure to clear the ground, and brings it down on the pavement again with force. When he tries to turn suddenly, he nearly falls down; he cannot walk unless he can see his feet. In *alcoholic paralysis* the foot is “dropped” and it has to be lifted high in order to clear the ground and the knee is much bent. In *flat foot* the person walks with his toes turned out. The person with *hip-joint* dis-

ease takes a long step with the sound leg and swings round the other one, thus walking lopsided.

Gallstones.—A gallstone is a little dried-up mass of bile-materials which forms in the gall bladder. When the stone is pressed through the gall tube into the intestine, it is sometimes too large to pass easily, and causes violent colic in the belly, which continues until it gets out of the narrow tube into the gut. The main symptom is intense pain on the right side, occurring in spasms.

It must be carefully differentiated from appendicitis, which occurs lower down on the right side.

The most common causes are sedentary habits, a rich diet, and diseases of the liver and bile ducts—and not infrequently following typhoid fever. The pain is frequently accompanied by a well-marked jaundice.

Hot fomentations may sometimes relieve the pain, but morphine may be necessary.

An attack of gallstone colic may terminate at any time in a surgical condition demanding operation, therefore a physician should always be summoned during such an attack.

The medical treatment consists of a regulated diet, largely vegetable, and systematic exercise between attacks. Mineral waters, sodium phosphate, calomel or podophyllin, and salol or urotropin are useful drugs.

Gangrene, or Mortification.—This name is given to the death of a part, as of a finger, or of a foot, or of a portion of flesh in a wound. It follows very severe local injuries, when the blood supply is stopped by the tearing or wounding of arteries and veins; the same results occur when the blood vessels are blocked by firm clots, as sometimes occurs in weakly, aged persons. Gangrene may be of the dry form in which the parts wither up, or “slough,” or of the moist form, in which the parts become a sodden decaying mass. The gangrene may lead to blood poisoning and death, but there may be a chance of prolonging life if the part affected can be removed by the knife—(amputation).

General Paralysis.—This disease is nowadays treated in asylums, and the sooner the afflicted person gets off to where he can be suitably looked after the better for everybody. The disease begins generally in the thirties. The average age of death is forty. It affects all classes, especially of townspeople, men oftener than women. The most

important cause is "Syphilis" (which *see*), and other causes are mental worry, overwork, alcoholism, and head injury. It would be useless in a book like this, to give a long account of the disease, and, as it is incurable, nothing need be said about treatment. The earlier signs by which the disease may be known are:—

- (1) Changed mental condition—jealousy, bad temper, fancies, illusions, delusions, loss of memory, extravagance of ideas, filthy and degrading habits. The patient sometimes shows the first sign of the disease when he goes to a shop and orders quantities of things he does not want and cannot pay for. Also, when he brags about his millions of money and watches and jewels when he is really poor.
- (2) Later, the pupils of the eyes are seen to be unequal, he loses the power to write, etc., and at last becomes helpless and bedridden.

Giddiness.—The medical name for this ailment is vertigo, it is derived from a Latin word meaning to turn round, and the principal feature of giddiness is a sensation that the room and objects around are turning round you, not that you yourself are turning round.

Giddiness may be only occasionally felt, and it may come on quite suddenly, and may as quickly disappear, or it may occur and not be got rid of for hours or days. It may occur as the only symptom of ill-health, or it may be associated with headache, and nausea, or sickness.

Giddiness is certainly a symptom due to a momentary fault in the circulation in the brain, and may, of course, be due to actual brain disease, but in general the cause of giddiness is to be found in disturbances of the digestive organs, and particularly from biliousness and other liver troubles.

One form of giddiness can be brought on intentionally by many persons, by turning round quickly while standing upon one heel, or by waltzing; many others feel giddy when on the moving deck of a vessel at sea; others, again, feel giddy when looking down from a high place, or over a precipice.

Nervous persons who have had one real attack are apt

to fancy they feel it coming on again; in severe cases of nervous debility patients may feel giddy whenever they get up from their beds or from their seats; others are afraid to cross open spaces for fear of falling.

Giddiness is commonly felt by patients who have lost much blood, or who are exhausted by fever or any wasting illness. Anæmic girls, pale from want of sufficient healthy blood, are subject to attacks of giddiness.

This ailment is also related to epilepsy, for when such sufferers have passed through an attack or epileptic fit, they tell you it began by a giddy feeling.

Persons who are very robust, who eat much more than they need, and are too full-blooded, are subject to giddiness. Certain peculiar defects of eyesight lead to this unpleasant symptom, and there is a disease of the internal ear, called Menière's Disease, in which giddiness is associated with deafness.

The poisonous principles of tobacco produce a giddy feeling in persons who are attempting to smoke for the first few times, and, of course, everyone knows that alcoholic drinks taken to excess, cause such giddiness as to make men stagger and fall down.

In general we may say that if a person in good ordinary health becomes giddy, the safest remedy to employ is a thorough good purgative dose of sulphate of magnesia in water.

Glands, Swollen.—When an enlarged gland is formed on a person who is in good health, we may be fairly sure that the swelling is curable, because its cause is not, as a rule, far to seek, and can be removed. Enlarged glands occur in certain situations. These are chiefly, the neck below the jaw, and just below the ear, the groins, the armpits and just above the elbows.

Now in each of these situations there are groups of "glands" which are called "lymphatic glands" in which the blood circulates, and in which the blood undergoes certain changes, fitting it for recirculation. If you cut or scratch your finger or foot with a dirty instrument or pin, the poison enters the skin through the wound, goes into the blood, and is carried upwards towards the body. If the poison could get into the body (or, when it does) you become ill for a time. But if you are in good health the set of glands which lie between the cut or wound and

the heart try their best to stop the poison, and to destroy it there. But if the poison is too much for them, then the glands begin to *swell* from the irritation of the poison, and get red, hot, and inflamed. As a fact the inflammation is Nature's way of getting rid of the poison. Ear disease, decayed teeth, enlarged tonsils, and vermin may all cause the neck glands to be swollen. The cause must, of course, be dealt with in every case.

Enlarged glands in the groin are produced by *gonorrhea*, *syphilis*, and by the poison from a sore place on the leg or foot.

A *swollen gland* or "bubo" will very often get better by itself, especially if poulticed. But often it becomes an *abscess*, and then the matter or pus must be let out by a cut with a surgeon's knife. It must not be forgotten that persons with consumptive tendencies are most liable to enlarged glands and these must be dealt with according to the case. Sometimes it is wise to leave them alone and they will gradually disappear. At other times they will have to be dissected out, or scraped out, according to their condition. In *all cases* cleanliness must be observed, sores must be healed, and decayed teeth must be attended to. (See also "Abscess.")

Goiter, or Derbyshire Neck (See also "Cretinism").—By goiter is meant a swelling in the thyroid gland, an organ lying on the front of the neck; in health it is neither seen nor felt, being very small and soft, but in goiter it may swell up to a very large size, making a huge, bulging tumor (on one or both sides of the middle line), which is not painful, nor hot, nor inflamed. It grows gradually and has but little tendency to go away, unless it is continuously treated; it is apt to appear first in childhood from 7 to 12 years old, and may last a lifetime without causing serious illness. It is most common in people who live in valleys among mountains, and may be due to habitual drinking of very hard water.

In treatment, the first requisite is to remove the patient from the locality where the goiter has started, if it be one where cases are of frequent occurrence; in all cases, however, change of air, scene, climate, and food are desirable. Put the patient under the most healthy conditions, and with plenty of open-air exercise and good food. The most successful remedy is iodine given internally in many forms,

such as iodide of sodium, iodide of potassium, or iodide of iron, together with the external application of iodine ointment or a mercurial ointment. Of recent years it has been found that many cases improve when treated by doses of the extract of the thyroid gland of the sheep; this can now be obtained in many forms, as a liquid medicine, or as a powder or pills or tabloids.

Another form of goiter is that commonly called *Grave's disease*, and in this case the disease has no relation to climate, soil or water, and is accompanied by a peculiar state of the heart and great blood vessels. The swollen neck is associated with protruding eyeballs which give a most notable appearance to the face, and yet the eyeballs are in no way diseased; there are also present a highly nervous state, shortness of breath and palpitation of the heart with throbbing in the blood vessels. This disease is also called "Exophthalmic goiter." It can be in no way treated by domestic remedies with any hope of giving relief.

Gonorrhea.—Gonorrhea is a disease which one is exceedingly liable to contract upon departing from the moral mode of living. It is readily transmitted from one sex to the other and among married people may thus be transmitted from the guilty to the innocent. It is a cause of a large part of the pelvic inflammatory conditions for which women require surgical operations and is the cause of a great deal of misery in the world.

The most important thing to remember about gonorrhea is that until it is entirely cured it can be readily transmitted.

In this disease, in the male, there is an inflammation of the urethra (the pipe for the passing of the urine), which gives rise to severe pain and smarting, especially on passing water, and very often to much general illness as well; fever, loss of appetite and weakness, in addition to the continual discharge of pus from the pipe. The disease is often the starting point of months or years of severe illness and pain. Most cases are curable by the surgeon, especially if the treatment be conscientiously carried out, but many half-cured cases get tired of being doctored, return to their immoral ways and are a real menace to society, to themselves, and to future generations.

The disease, in man, has dozens of possible complications.

Among the more serious ones are stricture, bladder disease, abscess of the kidney, ophthalmia which may lead to blindness, and gonorrheal rheumatism. This last disease, which occasionally affects women also, is in many cases incurable, and in all cases very difficult to treat.

Gout.—This is a very large subject, and it is difficult to know where to begin to discuss it. It is pretty certain that the word ought to be used to mean a very large group of symptoms, such as are referred to under such loose expressions as “goutiness,” “gouty tendency,” and the like. We are obliged to say that, notwithstanding the immense amount of research and study which have been devoted to gout, we are not much nearer a thorough understanding of how it is caused. We know more about how to guard against it, and how to treat it. But it is so mixed up, in many cases, with something of a *rheumatic* nature, that it is hard to *cure*, and sometimes even very hard to *relieve*. The word *gout* comes from the French word *goutee* (a drop), and from the Latin word *gutta* (a drop); and we are still obliged to say (as the old Romans and Greeks did) that gout is the result of the gradual deposits of *drops* of some material in the joints and elsewhere. We now know that the material is called bi-urate of sodium (a chemical substance derived from uric acid), and we know that it is deposited as a result of some defect in the kidneys which prevents their getting rid of some of the waste matters in the blood. But this defect is also considered to be a result of something wrong with the *nervous apparatus* of the body. Gout, in fact, is a nervous disease (in one sense), characterized by defective action of the kidneys and hence in storing-up of waste matters in the body.

Causes.—The people who have gout are mostly those who—in the first place—have what doctors call a *neurotic* family history (see “Neurosis”), and, in the second place, those whose kidneys are not equal to the strain of getting rid of waste matters from the food. Men are more liable to gout than women; but, perhaps, women are more apt to have “rheumatic gout.”

Note that the heredity of this disease is so strong that many persons who are and always have been strictly temperate and moral and careful, yet suffer from gout. But no doubt, a steady life in a gouty subject makes it unlikely

that he will be troubled much with gouty attacks. Painters and plumbers are liable to be gouty, because lead poisoning is apt to cause the disease.

The two chief varieties of acute gout are—*regular* gout, which is gouty swelling of a joint, and *irregular* gout, which is gouty pain and inflammation of some other part of the body.

Signs of an attack of gout in a joint.—Many people get a warning that there is going to be an attack, a day or two before. Such warning may be—wind in the stomach, numbness of fingers and toes, irritability of temper; sometimes patients feel livelier than usual. The patient goes to bed all right, and wakes up in the night, shivering and feverish, just before an attack, with violent pain in a joint—generally the big-toe joint.

The gouty joint is so tender and so painful that the patient cannot bear the weight of the bedclothes, and hates to be touched. The skin over the joint is *red, tight, and shiny*. After a few hours the pain abates, and is better during the daytime; but comes on again next night; thus continuing for about ten days. Then the skin over the joint gets paler and peels off. While the attack is going on the patient is very bad-tempered, thirsty and dyspeptic. After it is over he feels better than he has done for years. Then, sooner or later, another attack comes.

Treatment for an attack:—

- (1) Send for the doctor.
- (2) *Don't use* arnica, or poultices, or ice for a gouty joint.
- (3) If the pain is bearable, wrap up the joint in plenty of cotton-wool, covered with oil-silk, and lightly bandaged.
- (4) Otherwise, put the feet in a hot foot bath of water in which are several poppy heads (obtainable from the chemist). Or apply Baume Analgésique Bengué to the joint and wrap it up in gauze or flannel. Keep the part elevated.
- (5) Let the sufferer send out for an ounce of colchicum wine and let him take 40 drops of it at once in a wineglassful of water. He will have to go on taking colchicum in some form or other for some time; but colchicum has a certain depressing effect on the heart,

and no sensible man will take it without being supervised by his doctor. We only recommend him to take those 40 minims in case the doctor might be delayed.

(6) Diet to be very light—*do not give concentrated meat essences.*

Signs of Chronic Gout.—Dyspepsia, stone in the kidney, swollen and knobby finger and toe joints with lumps of chalkstones, skin eruptions, irritable heart, muscular pains, etc.

Treatment of a gouty tendency.—In young men gout is avoidable and curable, *especially if they become teetotalers.* There must be no greediness, nor gormandizing, and, in fact, the less meat and pastry gouty people eat, the better for them. Indolent habits are to be given up. Lots of exercise must be taken. Everybody who fears gout should take a heaped-up teaspoonful of phosphate of soda, and wash it down with a pint of clean water, every morning of his life, before breakfast. When a person has all sorts of pains and aches due to goutiness, he must be more careful with his diet, and he may take the following medicine:—Bicarbonate of potassium, 6 drachms; iodide of potassium, 2 drachms; colchicum wine, 2 fluid drachms; camphor water, to 12 ounces (mix). Take a tablespoonful of this mixture, thrice daily, in a wineglassful of water, after meals.

Grog Blossoms.—We should be very careful how we use this vulgar and unscientific name of the disease which doctors call “Rosacea,” for though drink is often the cause of it, or at least, the circumstance which keeps it up, yet “grog blossoms” are occasionally seen on the faces of persons who claim to be quite temperate and even teetotal. At first the red flush comes on just after eating or after exposure to the cold. Many women get red noses in the open air on a cold day. If it gets worse the whole of the middle part of the face, cheeks and nose, get permanently red and the little blood vessels of the surface of the skin get enlarged and visible. After a time this too-great nourishment of the skin of the nose causes the skin glands to overwork themselves, and so the skin gets shiny and greasy and scaly as well as red. Then the skin, if at all coarse in texture, gets covered with holes and pimples, and this condition has given rise to the vulgar word “grog blossoms.” In cabmen and men who are prone to drink raw spirits

after much exposure to the open air, the skin now begins to thicken, and perhaps to sprout into little lobules and bulbs and knobs of fat. But there are unfortunate people who never touch alcohol at all who get rosacea as a result of chronic indigestion, or again it may be a personal peculiarity, inherited from the parents. Even well-brought up women get rosacea from exposure to the air and feebleness of circulation.

The treatment is not hopeless if the patient will go without alcohol for always, and give up tea and coffee until cured. The doctor must be consulted to put the patient's stomach in good order. After that, the sufferer from a red nose is to take a 5-grain tabloid of ichthyol before breakfast and before retiring to bed. After a fortnight the dose is to be increased to eight grains, and after three weeks to ten grains, until the case is cured. This is to be combined with the local application of alkaline spirits of soap to the nose and cheeks at bedtime, or by using ichthyol ointment.

Gumboil.—A spot of inflammation, leading on to the formation of an abscess, and commencing near the fang of a decayed tooth. The gum is a very dense, hard structure, and the growth of the abscess causes great pain; it forms a red, tender swelling on the gum and may burst alongside the tooth, or through the gum, or in the cheek. Give a brisk purgative such as a dose of salts and senna, and get a dentist to open up the hollow tooth or to lance the gum; if this is not desired, some slight relief may be gained from holding hot water in the mouth, or applying a few drops of laudanum and spirit of camphor on cotton-wool to the gum, or by hot poultices to the cheek. Gumboils often recur and when this happens removal of the tooth is the only remedy.

Hairdressers, Hints to.—In some parts of Europe the government authorities compel all hairdressers and barbers thoroughly to disinfect all instruments and brushes immediately after use.

If such excellent regulations were in force in this country we should soon hear no more of diseases contracted by people in hairdressers' shops. Among the diseases spread, partly in ignorance, partly by lack of thoroughness in cleanly precautions, by hairdressers and barbers among their customers, are Barbers' Itch (which *see*), different forms of ringworm, boils, acne, itch, impetigo and others.

Of course, the self-respecting barber in this country also uses disinfectants, and is as thorough in his cleanliness as he knows how to be; but sometimes, from ignorance of the diseases in question, he does not know how properly to guard against them. We have therefore drawn up a few rules for the guidance of hairdressers in this matter of the hygiene of the toilet.

(1) Everything in the shop ought to be thoroughly cleaned at the beginning of the working day. Not only must the rooms be swept out with a broom (that only redistributes some of the small dust and hair on the floor); but a mop ought to be used after the broom, and the mop ought to be kept in a bucket containing a lotion made thus:—Dissolve one-eighth grain soloid of corrosive sublimate in a quart of water. Renew this lotion twice a week at least, and use it on the mop for disinfecting the dust on the floor everywhere. In addition to this, all seats and chairs and chair-backs should be sponged thoroughly with this powerful germicide lotion, and all basins, tubes, and taps also.

(2) All the barber's assistants should wear white cotton washable jackets with short sleeves, and no frayed cuffs beneath. All assistants should be required to wash their hands *and arms* in carbolic soap 5 per cent., and to keep the nails short and polished and clean. Nails should *never* be cleaned with a knife or steel pick, but with a nailbrush which is kept always in a little tray of lotion.

(3) Shaving brushes are peculiarly liable to convey contagious diseases unless kept quite clean. They ought to be washed in a corrosive sublimate lotion after every using. Trays, like those used by photographers for developing plates, should stand on the sideboard, half-full of boric lotion, and all scissors, clippers, and razors ought to lie in the lotion until just before use. Boric lotion does not rust steel instruments. It is made by dissolving a boric acid carton in a pint of boiling water. Some hairdressers dip the razor into hot water just before use, but the water must be boiling if it is to be of any special antiseptic use.

(4) The soap used is important, but the choice of it must be left to the individual barber. Be careful only not to use the same cake of soap for a spotty chin and a healthy skin in succession. The most hygienic way is to use one of

the soap-powder preparations, so as to have absolutely fresh soap for each customer.

(5) After shaving, the razor should be wiped on a washable india-rubber slab or tray, as is already done in many places. A spotty chin should then be sprayed with the weak corrosive sublimate lotion above mentioned, with a few drops of scent in it, and a small square serviette may be used to wipe dry. The powder afterwards applied should be made of equal parts of talc, zinc oxide, and starch.

(6) Combs used after hair-cutting should be disinfected, and brushes should be washed with 5 per cent. carbolic soap.

(7) Hairdressers who adopt these thorough measures should take care to advertise the fact in their windows.

Hair, How to take Care of.—(1) Use little grease or pomatum on your hair, unless your health is not good and the hair is brittle and splits at the ends. Then you can use a little pure *olive oil* which is to be rubbed on to the scalp and not just smeared over the hair.

(2) No animal fat or lard or lamb's-wool ointment should be used on the scalp. It only irritates the skin as it becomes rancid, and causes scurf.

(3) Don't wash the head with frequent irrigations of cold water. Nothing so soon makes the hair gray and scanty.

(4) To *wash the head*, make a lotion of a teaspoonful of ammonia to a quart of hot rain water, and add two tablespoonfuls of soft soap. A lump of carbonate of soda will do instead of the soft soap if you prefer it. After washing the hair, dry it very thoroughly on a rough towel—not a Turkish bath towel, full of fluff. If your hair is fair, that method will suit it well. But if your hair is dark, use the yolk of an egg beaten up with borax and rain water.

(5) *For thin, scanty hair.*—Quinine sulphate, 1 drachm; dilute sulphuric acid, 15 minims; rectified spirit, 2 ounces; rose water, 8 ounces—mix, and add glycerin, 2 drachms;—mix and shake well. Use this lotion, rubbed in the scalp, twice a day.

(6) *For thin, scanty dark hair.*—Take of good black tea-leaves, 1 ounce; add boiling water, 1 pint. Infuse in a teapot. Leave to cool. Strain off the infusion, and add to it, Jamaica rum, 3 fluid ounces. Rub some into the roots of the hair with a piece of rag, morning and evening.

(7) The color of hair is due to mineral pigments. Very fair hair contains magnesia, and fair hair often remains unchanged, even in old age. Brown and chestnut locks contain sulphur, and a little iron; black hair pigment is rich in iron. Gray and white hair have no iron and very little sulphur. Therefore, most hair restorers and dyes contain iron and sulphur. But all ordinary shop-sold dyes are *apt to be unsafe*, and may have poisonous minerals in them which will at last make the hair and scalp decay.

There is, in fact, no really satisfactory hair dye, as far as we know.

(8) Greasy lank hair may be made somewhat dryer and curlier by the use of such lotion as this:—Bicarbonate of soda powder, 2 drachms; borax powder, 2 drachms; eau-de-cologne, 1 fluid ounce; rectified spirit, 2 ounces; tincture of cochineal, 4 fluid drachms; distilled water, 16 ounces. (Mix and shake.)

(9) For dry, stubby hair, instead of grease or pomade, use:—Eau-de-cologne, 8 ounces; tincture of cantharides, 1 ounce; oil of English lavender, 15 drops; oil of rosemary, 20 drops. (Make a lotion to be rubbed well into both hair and scalp.)

(10) After an illness your hair may come out in handfuls. To remedy this, cut it quite short and keep it so for a year, using the lotion given above in paragraph (5). This plan enables both air and light to get down to the scalp and enables you to employ friction of the scalp with a wire brush. *Use no grease.*

(11) Shampoo, for scurfy heads:—Yolk of an egg, a pint of rain water, an ounce of spirit of rosemary. (Mix and warm before using.)

(12) “Silver hairs among the gold.”—A few gray hairs appearing in a youth show that the scalp is badly nourished. Get the doctor to prescribe you an iron tonic, and use cheap claret as a weekly head wash.

(13) *To make the hair curly.*—All shop-sold preparations for this purpose are risky to use. The following “curling fluid” is free from objections:—Carbonate of potassium, 12 grains; warm water, made soapy, one pint. (Dissolve.—Stir up into a froth, damp the hair brush with it and brush the hair thoroughly at bedtime, with the wet brush. Then curl up the hair on rollers of wire and kid [such as all first-rate hairdressers keep for sale]. In the

morning the curliness of the hair will outlast even rainy weather to some extent.)

Never use crimping-irons, they only destroy the hair at last.

Hair, Loss of.—(See “Baldness.”)

Hairs, Superfluous.—Superfluous hairs on the faces of women are a fruitful source of profit to skin doctors, beauty doctors (so called), chemists, and hairdressers. Electrolysis (or the removal of hairs by electricity) can only be done by specialists. Perhaps as many as twenty hairs may be removed at one sitting. There is only one class of chemicals which may help in the matter—caustic alkalies, in combination with sulphides, and these are dangerous. A paste is made thus:—Quicklime, 16 oz.; pearl-ash, 2 oz.; liver of sulphur, 2 oz. These are mixed and finely powdered, and enough water is added, as required, to make a paste. The paste is spread thickly on the skin for three minutes, then it is scraped off with a bone paper knife, and cold cream is applied instead. The lip or chin thus treated will, perhaps, itch, grow red, and smart. The epidermis is removed. The hairy, downy growth is all gone. But the hair bulbs, deep down in the skin, remain, and later on a fresh crop of hair comes up, as if nothing had been done. A German physician has made a liquid depilatory. Here it is:—Tincture of iodine (1 in 10), half a drachm; Venice turpentine, 1 drachm; castor oil, 1½ drachms; rectified spirit, 1½ oz.; collodion, 6 oz.—Mix. This is painted on the part at night, and next morning the film is peeled off; and the hairs if they behave themselves properly, come up by the roots. But sores may be left, and they are difficult to heal. No one should try such experiments except under skilled advice.

Hanging.—If ever you come across a person who has hanged himself or herself, or who has been hanged by someone else—that is, if ever you see a body hanging by the neck—*get a knife or scissors and cut the body down.* Don't lose your presence of mind; don't be foolish enough to stand horror-stricken, or to rush away and whisper the awful fact to somebody else. This kind of foolishness is, unfortunately, common enough in cases of hanging, but let the reader of this book be more sensible.

Cut the body down.—(Many a criminal or highwayman in the old days was cut down by his friends and brought

back to life again, even after half-an-hour's suspension.) When you have cut it down, loosen the noose round the neck and perform "artificial respiration," as described under "Drowning." (See "Drowning.")

If the neck is not broken you can probably restore the patient back to life again.

Hangnail.—This means a sore finger from irritation set up by a little tag of skin peeling off near one of the nails.

When one is in a weak, unhealthy condition the skin of the fingers becomes liable to fester whenever any little scratch occurs; any little raw spots get infected with dirt and become acutely painful. To obtain a cure clean the part very thoroughly with soap and hot water, and then with clean water, dry it, and paint the spot with flexile collodion, or the liquid called "new skin"; under this coating the little ulcer will soon heal up; after this rub vaseline into the skin of the fingers every night for a week.

Harelip.—This is a notch or cleft in the upper lip on one side of the middle line, caused by a lack of proper development of the face. Sometimes there is a notch on the other side of the middle line as well, leaving a central flap of lip (double harelip). There may be, in the same person, an incomplete development of the palate as well, called *cleft palate*.

Treatment.—A very slight notch in the lip may be operated on a few weeks after birth. Of course, there is no cure for the deformity, except a plastic operation. Cleft palate, if complete, can also be cured by operation, and this ought to be done when the child is about 18 months old. The deformity will interfere with learning to speak, and until harelip is cured the child cannot suck properly.

Hay Fever.—This refers to a peculiar catarrh of the nose and eyes affecting some people from May or June to the latter part of July (*rose cold*) or from the latter part of August to the first frost (*autumnal catarrh*).

It runs in families, especially gouty families, and affects chiefly *men* of high intellectual powers. It is, in fact, a neurosis or functional nervous disease.

Signs.—The eyes and nose water, the patient sneezes, has a hard cough, and attacks of shortness of breath. But there is no feverishness. The attack may last for several weeks, though a change of air and scene, especially to a barren and non-fertile district, will often effect a cure.

Treatment.—In the first place, a person liable to hay fever must avoid the fields during the summer. A seaside place is generally the best to go to, provided it is bare and there are no forests near.

The only medicine of much service is Dunbar's *pollantin*, a few drops of which are to be instilled into the eyes every morning during the attack. Lately, *supra-renal-extract spray*, 5 per cent., has been used to spray nose and throat with a good deal of success in these cases. A solution of quinine used as a nose spray is also useful.

Headache (Varieties of).—Headaches may be due to dozens of different causes. No doubt the reader cares very little about that—what he or she wants is to know how to *cure* a headache! But there is no royal road to anything in life, and certainly not to the curing of a complaint. That is why doctors are real necessities, in spite of the quacks and their cure-alls. The man who analyzes, and studies and builds up personal experience of disease, is the only man whose opinion is worth anything in these matters; and every doctor will tell you that there is no royal road to a cure. But he who studies the possible causes of headache, and then applies his remedy, has some chance of curing the complaint. A *dyspeptic* headache may be known by the pain being worse after food, and by its being accompanied by costiveness, acidity, and a feeling of sickness. The headache of the *anæmic girl* occurs in girls who are pale or yellow, and have pale lips, and suffer from palpitation of the heart. *Hysterical* headaches are usually worse at certain times, and are generally confined to one special part of the head. Such headaches are said to be like nails driven into the temples. *Rheumatic* or *neuralgic* headaches are generally diffused over the whole head; the scalp is tender, and there are rheumatic pains in other parts or joints. *Sick* headaches are ushered in by flashes of light in the eyes, dizziness, or temporary blindness. After the headache, which is generally quite local, comes a feeling of nausea or sickness. The headache of the person who suffers from *neurasthenia*, or nerve exhaustion, is generally a feeling of weight on the top of the head, and is attended with a good deal of confusion of thought. The temper is irritable, and the patient is sleepless. There are many other varieties of headache, some connected with actual brain disease. But it is impossible to go into those in this

article. As to cures, they must obviously depend upon the cause of the complaint. Anæmic and hysterical people will always be subject to headaches, until the anæmia is cured by large and continued doses of iron; and the hysteria is improved by marriage or by a little severe treatment (see also "Hysteria").

This subject seems so important that we shall give a more detailed account of a few of the different kinds of headache, and some prescriptions. We have already warned the reader that he must study to find out the *cause* of the headaches before taking remedies; and we may add that many of the "headache powders" of the patent medicine market are either dangerous or useless.

I.—*Migraine or Sick Headache*.—These headaches occur periodically. They come on regularly at certain intervals, or else occur quite unexpectedly without traceable cause. The attacks may begin at any period of life and affect one side of the head only. Some patients feel chilly and irritable and depressed before an attack; then come disturbances of vision—spots and flashes of light, zigzag figures and blurring of sight, even blindness for a time, especially blindness of one half of the field of vision. The patient seeks a dark room and a warm corner. Then comes a violent headache, which lasts about an hour or more, and is followed by sickness and nausea and yawning. When he has vomited several times, and a sour liquid has come up, the headache ceases and the sufferer falls asleep. Severe forms may last two days. The disease is frequently inherited, especially from gouty parents.

The *treatment* by diet is unsatisfactory; the most abstemious sometimes have migraine. Between the attacks, especially if they are regular, it is a good plan to take five grains of butyl-chloral and twenty grains of sodium bromide thrice daily for three days before the attack is expected. Many people keep tabloids of *antipyrin* at home, and swallow one when they feel headachy. But this is to be condemned, because the drug lowers the heart. Phenacetin is better; and caffeine is better still; during attacks take one grain with a little sugar of milk every hour until recovered.

II.—*Anæmia, Headache due to*.—The pain in this type of headache is generally more or less continuous, and affects sometimes the forehead, sometimes the back of the head, and

sometimes the top. Bodily and mental exertion make it worse. The patient is generally costive, drowsy, listless, and sleeps badly. Of course the anæmia itself must be dealt with by the doctor. Tea and coffee are useful remedies, but alcohol does harm. If the patient is hysterical as well as anæmic, let her take a one-grain pill of valerianate of zinc and one-sixtieth grain of phosphorus twice a day, for a month at a time, and ten to twenty grains of sodium bromide at bedtime, occasionally, to produce sleep.

III.—*Congestive Headaches* are due to over-indulgence in food or drink; sluggish liver; the change of life (which *see*), and heart disease. The blood vessels throb, the face flushes, the pain gets worse when lying down, and there is giddiness. These headaches cannot be cured by drugs, except those drugs which relieve the *causes* of the condition. But until the doctor comes, and until the general state of health is improved, purgative medicines will always give relief.

Health Resorts.—(*See* “Climate for Invalids.”)

Heartburn is a burning sensation, sometimes amounting to pain, passing up along the food pipe or gullet from the stomach to the back of the throat. Sometimes mouthfuls of an acid fluid are brought up at the same time. It is caused by Acidity (which *see*), and the return of acidified food from the stomach. (*See* “Indigestion.”)

Heart Disease.—The heart, which is situated in the chest, between the lungs, a little to the left of the middle, is the most important organ of the body. It is formed of red flesh or muscle, and contains four cavities, through which the blood is constantly flowing from the veins, and on into the arteries, to nourish the whole of the tissues of the body. The heart is in a constant state of contraction and relaxation, which continues as long as life lasts; even its momentary stoppage causes a partial death, called fainting. In order to maintain health, the heart must be in good order, and whenever any part of the heart is injured by disease, there are sure to be some symptoms of ill-health, as well as some defect in the circulation of the blood.

Diseases of the heart may be considered in two groups—*functional* and *organic*; the first including all cases of wrong action of the heart without disease or deformity of the structural anatomy of the heart; the second includes all defects of the walls of the heart, all faults in the

muscular texture, and all imperfections of the many valves within the heart. All actual organic faults are incurable, but some relief may often be given by suitable treatment. On the other hand, functional heart diseases are often temporary; they may come and go with variations in the constitution.

The most common cause of functional heart symptoms is the state called Anæmia, or bloodlessness, which means that the blood is too weak and watery. It is shown by pallor of the cheeks, and lips, and ears, palpitation on slight exertion, a state of breathlessness, and a tendency to fainting. Hysterical women also suffer from this form of heart disease, and it is often seen in women past middle age. Drunkards are liable to it, and an excessive use of tobacco may cause a feeling of weakness, giddiness, trembling, and faintness due to an unsteady cardiac action. Patients who are weak after a serious illness, or after an accident, have almost always a temporary loss of the strong, regular action of the heart which is so necessary to personal comfort. Persons with feeble anæmic hearts often have puffy ankles at night and swollen eyelids in the morning. The pulse is generally too quick, but too small, thready and feeble; there may be a dull pain in the chest, and very often there is an inability to sleep lying on the left side; in some cases there are headaches, giddiness, noises in the ears, and flushings of the face. In these cases a doctor must try simple remedies, in the hope that there may be no organic disease, for the sounds heard by the stethoscope much resemble those of real valvular disease.

I.—*Organic heart disease*.—The several forms of organic cardiac disease are due to actual faults in the heart's muscles, and the valves within the heart. In some cases these faults are present at birth, and continue during life, but in other cases the mischief arises from over-strain, or from *rheumatic fever*, or from fatty degeneration of the muscles. A wasting or atrophy of the heart is also known, and an over-growth or chronic enlargement of the heart is often present as a secondary result of obstructions to the circulation of the blood, as, for example, from chronic alcoholic hardening of the kidney. Still another and very fatal form of heart disease is called dilatation, in which the heart is larger, but not heavier; and this is due to a dilating, bulging, or enlargement of the cavities, while the

walls get thinner and weaker. This disease often leads to sudden death from a faint, or from spasm of the heart. There are four valves within the heart, through which the circulating blood is constantly passing, and these have to open and close about 70 times in each minute of our lives. Whenever the valves are out of order, or deformed by such inflammation of them as occurs with rheumatism, there is more or less disturbance of circulation, leading to various symptoms, such as pain, breathlessness, cough, palpitation, fainting and dropsical swellings of the legs and face, all due to the effects of the valve disease on the heart walls.

II. *Valvular diseases*, which are mostly due to attacks of inflammation, caused by rheumatic poison, of the delicate membrane lining the cavities within the heart, are of two sorts—first, those which obstruct and delay the blood-flow through the valves, and, secondly, those which prevent the correct closing of the valves at each contraction of the heart. These valvular troubles due to inflamed membranes are most commonly found to originate during the course of acute rheumatism, during which the large joints of the limbs are most affected. Another form of valvular mischief arises in late middle life from the deposit of chalky flakes and bony layers in the structures forming the valves; the result is that the valves, which in youth and health are delicately soft and elastic, become hard and brittle, and are liable to lead to sudden faintings and unexpected death. The form of heart disease in any patient is partly judged from the symptoms, and partly from the sounds arising from the heart's action, which can be heard outside the chest by means of the stethoscope in the hands of a skilled physician. Skill in this process is not easy to acquire, and when gained it needs constant use, for the ordinary person hears nothing but confused and very slight sounds when he applies the stethoscope to a chest.

III. *The doctor's examination of the heart.*—The introduction of the use of the stethoscope, which is a wooden or metallic tubing, having at one end an ear piece and at the other a chest piece, has very much increased the power of the physician to diagnose or discover the nature of a case of heart disease. This instrument is now also made of india-rubber tubes, for use with either one or both ears. By its means the sounds made in the lungs by the breathing are also heard, and when listening to a chest in certain

positions both lung and heart sounds are heard at once, so that experience and skill are needed to come to correct conclusions as to the origin and meaning of chest sounds. Diseases of the valves of the heart give rise to sounds called *murmurs*. The study of these murmurs is by no means easy, and it is, unfortunately, true that some forms of a very serious heart disease do not produce any of these curious noises. Another mode of discovering heart diseases is by the process called percussion, or rapping the chest surface and noting the clearness or dullness of the musical note produced. By this means a physician can tell how large a heart is, and whether or not it is displaced from its correct position between the two lungs. A doctor also gains a knowledge of the heart's action by merely looking at and gently feeling the chest surface. By these means he notices the place and force of the heart's beat. The apex, or pointed lower end of the heart, should tap against the chest on the left side of the breastbone, about three inches from it, and between the fifth and sixth ribs; its action should be regular as to intervals, and regular also as to force. Nervous people, however, will be found for a few minutes to have an irregular throbbing action of the heart, called palpitation, when a doctor tries to examine it. This alone is no proof of heart disease, but only of nervousness. Attacks of palpitation, or heart-throbbing, are a frequent symptom of heart disease, possibly only due to a weak, or fatty, or nervous state of that organ, and are not a proof of actual structural disease, nor of valvular mischief. Shortness of breath and panting on exertion are also signs that the heart is not in good order. The pulse, as it is felt conveniently at the wrist, gives valuable indications of the rate of the heart's action and its strength. When it is irregular, and especially when it occasionally misses a beat, medical advice should be sought.

Heating.—There is perhaps no department of domestic economy about which greater ignorance is displayed than the warming of houses. Among the poorer classes more especially, this ignorance, combined with more or less carelessness, leads to the most reckless waste in the consumption of coal, even when poverty necessitates its being purchased at the cost of considerable deprivation in other directions. Poorly constructed fireplaces have been to blame for this. In recent years some improvement has been ap-

parent, but even now we have not seen the last of the hideous, hollow-backed iron grates.

Closely associated with the comfort, efficiency and economy of heating is the subject of humidity of the air. Humidity is harmful not only if too high but also if too low. Room temperature should be maintained at 65° to 70° F. When heated air is maintained at a temperature of 72° F. the humidity is usually about 24%.

If now the humidity is artificially increased to 50% the body feels the same sense of comfortable warmth if the temperature is only 65° F.; and in this reduction of temperature there is not only a saving in fuel cost of 12½%, but the occupants of the rooms have increased freedom from influenza, catarrh, coughs, and colds.

Overheated air which lacks moisture subtracts it from any surface in the room—the skin, hair, and mucous membranes of a person—hence the discomfort. The faults of most heating apparatus are mainly due to their superheating the air, and to their lack of any provision for ventilation.

The principal methods of heating are—open fires, closed fires and stoves, hot air and pipes containing hot water or steam. One of the best methods is that known as the “plenum” system.

Open fires carry off large volumes of air besides their own products of combustion, stoves only a little; hot pipes not at all; while fender stoves not only do not ventilate but add to the impurity of the air.

Grates or Open Fireplaces:—

These are excellent aids to ventilation, extracting from 10,000 to 20,000 cubic feet of air per hour through the chimney. If, however, pure air is not provided to meet the demand the air of halls, kitchens, cellar or water-closet is drawn upon with the result that good ventilation is not accomplished. The ordinary fireplace is also extremely wasteful of fuel, as only 12 per cent. to 14 per cent. of the heat generated is utilized in a room, the remainder escaping up the chimney. The common experience in a room so heated is that the person near the fire is very hot, while at any distance from the fire the room is cold.

Gas stoves are economical and cleanly in use, create no smoke and can be lighted, extinguished or regulated in a moment.

A gas stove burns from ten to twenty or more cubic feet per hour, therefore the amount of air consumed, which must be renewed, is considerable.

Stoves have their advantages and disadvantages.

There is less loss of heat than with open fireplaces or grates, and the room is more uniformly warmed. The disadvantages are,—poor ventilation, air which passes over a stove becomes too dry, the burnt organic particles of air may give a disagreeable odor and carbonic oxide gas may escape, giving rise to headache and a feeling of discomfort.

Hot Air is advocated by some authorities as the best mode of warming houses, as well as public buildings.

This may be done by a basement furnace and conveying the warmed air to all parts of the house by special channels. The essentials for this form of heating are: a brick-lined fire chamber, an exhaust flue for foul air and a supply of fresh air from out-of-doors—not from the cellar.

Hot Water and Steam Pipes are frequently employed for warming houses as well as offices and public buildings. This system, if properly applied, is an excellent one, but one usually finds, in cases in which it is in operation, that all principles of ventilation have been completely disregarded. The wholesome influence of the ordinary fireplace in changing the air of the room is lost, with the result that the same foul air, which has been breathed for hours on end, is circulating in warm currents round the room in question.

No system of warming by hot water or steam pipes is admissible, unless both inlets and outlets are provided for ventilation. The best method of introducing air into a room warmed in this manner, is by so arranging the openings that the incoming air must first circulate over the hot pipes. These are known as ventilating radiators. A very convenient form of such a device is the electric radiator which possesses the advantage of yielding no products of combustion and producing heat which is available immediately the current is turned on.

The form of heating device which is by all means the most preferable for public and semi-public places, theaters, apartment houses, museums and private houses, if the expense is not a drawback, is the "plenum" system, or the indirect system of radiation.

The out-door air is sucked in from near the roof-level through a large shaft into a cold-air room, where it is moistened and washed by a spray or water curtain, and whence it passes through a dust-fitter, consisting of a double layer of fine wire gauze or cloth. Thence it passes through tempering radiators and humidifier into the revolving fan whence part passes through a second radiator to be further warmed,—the other part not further warmed being mixed with this warmed air and the mixture carried through flues to the rooms.

By this method the temperature and humidity of the air can be controlled by thermostats and humidostats in any room, the air is pure and clean, and circulation of air is assured as it is not unusual to supply a million cubic feet of air an hour by this method.

By introducing into this circuit a cooling plant operated by expansion of air, evaporation of liquids or the Carré ammonia process, rooms can be cooled in summer as well as they can be heated in winter.

Heatstroke (Sunstroke).—When a person is exposed to a broiling sun, or to intense moist heat, the body is apt to become overheated and to suffer from the results. Those who drink alcohol and those who are depressed by worry and anxiety are the ones most liable to be made ill by exposure to great heat. Among women, laundresses, bakers, and sempstresses, in ill-ventilated, crowded rooms, and tight-lacers are those who are most liable to heatstroke.

There are three different ways in which intense heat may affect an individual:—(1) The first is called *Heatstroke*. The person feels suddenly sick and giddy, then drowsy. The skin is pale and clammy, the pulse is quick and intermittent, the breathing is gasping and sighing. The sufferer may die of heart failure (syncope). To cure him, let him lie down flat, give him sal volatile (a teaspoonful in a wineglassful of water), or brandy, and rub the hands and feet.

(2) *Heat apoplexy*.—This looks just like an attack of apoplexy (which *see*), occurring in a very hot place. There is unconsciousness and there may be fits. Pump cold water over head and back, rub the body with ice and give a rectal injection of cold water. The body is intensely hot in this form of heatstroke. If the patient doesn't recover his

senses as his body gets cooler, shave his scalp and put a large blister on.

(3) The most serious form of sunstroke is called *Thermic Fever*. The heat of the body runs up to about 108° Fahrenheit or more, and the patient simply burns rapidly away, if you cannot save him, in a day or two. He has great thirst, quick bounding pulse, pains all over, headache, vomiting and gasping for breath. The body may be swathed in a sheet wrung out of cold water.

Hernia, or Rupture.—This word means the protruding of an organ into or through the wall of the cavity to which it belongs. Thus, a hernia of the lung is said to be present when there is a wound of the chest wall and the lung sticks out or escapes through it. But the word *hernia* is at the present day almost exclusively used to mean a rupture or tear of some part of the *belly wall*, which allows a “knuckle” of bowel to slip through it and appear as a tumor (or swelling) beneath the skin. The rupture does not affect the *skin* but the layers of muscles and membrane, which are less tough.

The anatomy and contents of hernial protrusions are difficult to understand, and we shall not attempt a popular description.

The important thing for the sufferer and for the general reader is to understand something about the different *types* of rupture and the *risks* attending the neglect of a rupture.

Rupture at the navel (umbilical hernia) occurs in infants sometimes, and is seen as a lump pushing the navel an inch or two out of the belly, especially prominent when the child strains or cries. A concave circular pad and bandage will have to be worn. Some doctors make a pad out of a cut beer-bottle cork and apply it with adhesive plaster.

Inguinal hernia.—This is a rupture at the groin. The swelling may be either very slight, or considerable, and in men the lump escapes down into the purse or scrotum, and lies alongside of the testicle there. This is the commonest form of rupture.

Femoral hernia is the variety which is most common in women. There is a lump under the skin at the upper and inner part of the thigh.

Double hernia.—Any person may have a rupture on both sides, and they may be of different varieties.

Ventral hernia is the name given to a protrusion of the bowel through some artificially-made opening, such as the weak scar of an old abdominal operation.

Congenital hernia is one which exists at birth.

Acquired hernia is one which is developed later in life through a strain or accident.

Reducible hernia is a rupture in which it is possible at any time to return the tumor into the place where it belongs by gentle pressure with the fingers in the right direction.

An *irreducible hernia* is one which cannot be returned to where it belongs, either because it sticks to its new surroundings because of inflammation; or because it has grown too fat since it escaped through the rupture, or for some similar reason.

A *strangulated hernia* is one in which a large knuckle of bowel has been forced (by coughing or straining) through a very narrow orifice, and the tightness of the opening interferes with the proper circulation of the blood in the bowel. By-and-bye the bowel tumor swells up, and unless a surgeon can succeed in "reducing the swelling" or in cutting through the band of constriction, the bowel will mortify, and the patient will die of shock and blood poisoning. *Any hernia may become strangulated.*

Causes.—Many hernias are produced suddenly by straining. The patient feels something give way and finds a lump there. More often the hernia develops gradually, in a person who is always lifting heavy weights or doing work that is too much for him. In coughing or straining in the w.c. the hernia "comes down," and the patient feels insecure and presses his hand over the rupture. Even a small rupture is apt to produce constipation (costive bowels).

Symptoms of strangulation.—If in a person, known or not known to have a rupture, there occurs a sudden abdominal pain at the seat of the rupture, stoppage of the bowels, and vomiting, the probability is that he has a strangulated hernia, and a doctor must be sent for at once. Every minute of delay is dangerous. An operation will *probably* have to be done in any case, but the longer the delay the more severe will be the operation. Old persons who may have had ruptures for many years without much trouble from them may be taken with serious sudden vomiting, pain, and costiveness; and such cases ought always to

be examined to see if they have a strangulated hernia or not.

Treatment.—There are two ways of dealing with a rupture. The person must either wear a *truss* or he must undergo an operation for a radical cure of the hernia, and in most cases the operation is by far the better way.

Of *trusses*, we may say that if a truss fits comfortably, keeps back the hernia entirely and produces no pain nor chafing of the skin, it may be considered in every way a suitable instrument.

“In the case of infants, the constant application of a truss day and night will effect a complete cure within a year in the majority of instances of inguinal hernia,” writes Dr. Whitla. No baby is too young for a truss, but it ought to be made waterproof and easily cleanable. The truss may be left off six months after the rupture is considered cured. Adults must see that their trusses *fit accurately*, which cheap trusses seldom do. A badly-fitting truss causes a great risk of strangulation. Patients must have two trusses in case of accidents, while one is undergoing repairs.

The skin under the truss pad should be kept dusted with zinc oxide. See that growing young people with ruptures are kept supplied with powder, and with new trusses when they grow out of old ones.

In young people with recent ruptures, well-fitting trusses, worn night and day, may be regarded as *curative* in many cases, after a year or two.

If a hernia be irreducible, either a special kind of truss must be worn, or the hernia must be cured by an operation.

The operation for the radical cure of herina is not in itself a dangerous one, and necessitates lying up for about three weeks. Only an operating surgeon can decide whether the operation ought to be done in any given case. Even old people with old ruptures may be cured.

The operation involves no risk to the testicle or to any other organ.

The ailments which may complicate, or be mistaken for hernia, are:—Varicocele, hydrocele (a collection of watery fluid in the purse, alongside of the testicle); retained testicle (that is, one which has not descended from the abdominal cavity, where both testicles are before birth);

hematocele (an effusion of blood in the purse); and others.

Never pay heed to quacks who advertise "cure" of rupture by means of lotions or plasters.

Herpes (Pronounced Her-peeze).—"Shingles" is the old-fashioned popular name of the disease which medical men called Herpes Zoster. It is one form of Herpes, which is a skin disease marked by patches of inflamed skin, upon which a group of little raised, red, tender pimples spring up. These pimples grow for one or two days, and then each one is found to contain a little drop of yellowish liquid; at length they burst, or else the heads get rubbed off, and a little sore discharging surface remains for several days, and may dry up into one or more little scabs. If the scabs are not disturbed the skin heals under them, and when the scabs fall off there is only a little reddened patch, and in a few days more the natural appearance is restored, except for a pale-brown stain which lasts a few days longer. Shingles appear generally on the ribs; it may effect one side only of the chest, or both at once, or one after the other.

Shingles is generally accompanied by some constitutional disturbance, and begins with a chill and shivering. Pain is felt in the side, and the skin is tender, before any spots appear; this pain is sometimes quite severe, and resembles neuralgia. In children the rash is found to give rise to intense itching, while in old people there is more pain and tenderness than irritation. In some cases the pain ceases when the rash breaks out, and is replaced by a sense of constriction—a tight feeling, with smarting.

The eruption often comes out, not all at once, but in successive crops, until there may be perhaps a dozen little patches, extending half-way round the chest. These run the course already described.

It is very important that these pimples and vesicles should not be torn by scratching, because if so injured there may be several ulcers, which are difficult to heal, and will leave ugly scars. In delicate and unhealthy persons the glands in the armpit may become a little tender and enlarged for a few hours.

This is a somewhat serious disease, especially in aged persons; it seems to be generally set up by the effect of a chill to the skin. The disease runs a course of a fortnight,

but may last three or four weeks. In the beginning of the attack it is well to go to bed and stay there for a week. Salines and purgatives should be taken, and when the pain is severe opium or morphine may be needed. Locally, zinc ointment does good, or the rash may be dusted with dry powder of starch with bismuth, or boric acid, and a little dry morphine may be needed.

Mild cases, especially those which are relapses, may be treated without a doctor, but if the pain and neuralgia which accompany and follow the attack are bad enough to require morphine, a doctor's prescription must be obtained, or the chemist will not supply the medicine.

The special treatment of Herpes when it affects the lip (*see* "Cold in the Lip") is to bathe it with water, as hot as can be borne, in which some bicarbonate of soda has been dissolved. Bathe it several times a day. When there are scabs, do not pick them off but apply resin ointment at bedtime.

Hiccough is a spasmodic indrawing of the breath, which needs no special description as it is familiar to everybody. Most cases of it are caused by mere indigestion; but when it occurs in such serious diseases as chronic Bright's disease and typhoid fever, and lasts a long time, it is a sign of grave importance.

Treatment.—Generally none is needed. A teaspoonful of compound spirit of ether, if swallowed, will generally stop the hiccough. When continuous and excessive, the doctor ought to be asked to treat it.

Hip-Joint Diseases.—These are nearly always of a tuberculous nature, that is, are caused by the same germ which causes "consumption of the lungs." The disease is commonest in children and young people. At the very first the disease of the joint gives no pain in the hip joint itself, but the child will complain of *pain in the knee* and down the inner side of the thigh. Then the symptoms of the hip mischief begin.

(1) Slight stiffness at the hip and wasting of the muscles and flesh of the thigh on that side. The joint soon gets "tired."

(2) If the child be put on his back in bed, you see that he bends his hip a little, bends his knee a little, and

turns the whole leg outwards, separating it from the other.

(3) When the child walks during this stage, he walks lame, and the diseased leg *appears* to be longer than the one on the healthy side.

(4) Later, there are starting-pains in the joint at night, and if you put the child on its back in bed now, or watch it standing up, you will see that the leg of the diseased side is turned inwards, nearer to the other and with that knee over the sound knee. See him walk, and you will notice that now the healthy leg seems to be longer than the other one.

(5) If untreated by prolonged rest and splints, an abscess will form in the diseased joint and the matter may burst through the skin somewhere or go into the back passage. If it all escapes and the child is pretty robust the joint *may* now get well, but it will remain stiff and fixed.

It is useless to say more about treatment here. These cases cannot be dealt with except by a surgeon.

Homeopathy.—This system was the invention of a German doctor, named Hahnemann. It is based on the theory that “like cures like”; for instance, vomiting ought to be curable by an emetic! Real Homeopathy has proved an utter failure, both in practice and in theory, and the modern homeopathist is a faddist, and, if a successful healer, cannot be true to his principles. The fundamental rules of homeopathy are these:—(1) Ascertain the effects of medicine on persons in health; (2) choose the remedy whose action corresponds with the symptoms of the patient; (3) give the remedy by itself alone; (4) give a very small dose of it. Hahnemann, himself, pretended that only infinitesimal doses were necessary; that 1-100,000 grain of belladonna, for example, is enough for each dose in the treatment of scarlet fever. But, although the whole theory and practice of homeopathy are unworthy of serious notice to-day, yet the movement has had its uses in discouraging the over-use of drugs, and in encouraging reliance on fresh air, rest, and good nursing. Seeing that most cases of illness tend to get well with suitable dieting, rest, and fresh air, there can be no doubt that the addition of microscopic

doses of drugs is, in the way of treatment, preferable to the continual and indiscriminate tabloid-swallowing, which is so common at the present day.

Housemaid's Knee.—Over the kneecap, and below it, we find a little flattened bag of liquid, intended by Nature to act as a “buffer,” and protect the joint from injuries or bruises, such as might be produced by kneeling. In a housemaid, who kneels often for long periods, while scrubbing and polishing, the little bag (called a *bursa*) at the lower edge of the kneecap is apt to become inflamed and enlarged, and at last to form a sort of tumor below the knee, covered with a tough and reddened skin.

Treatment.—Strong iodine liniment should be painted on all over the bursa daily until it blisters. Then dress the blister with clean rag or lint, smeared with boric ointment, and a bandage. If this plan fails the doctor will “tap” the swelling, let the fluid out, and inject a small syringe-full of iodine tincture and water (equal parts). The iodine is squeezed out again after a few minutes, but it sets up an inflammation in the little bag, which results in its being obliterated.

Hydrocele.—This is a collection of fluid in the scrotum or purse of the male. It is a sort of dropsy of the bag which holds the testicles. It may be either single or double—that is, on one side only or on both. The two sides of the purse are quite distinct from one another, and each testicle lies in a pouch of its own.

Causes.—A hydrocele may be congenital—that is, a child may be born with it—or acquired. Sometimes it seems to come from a bruise, or to follow inflammation of the testicles (orchitis), whether due to an injury or gonorrhea. But very often the cause is quite unknown.

Signs.—A hydrocele must not be confounded with hernia or varicocele, or enlargement of the testicles, or hematocele (blood tumor), but it is quite impossible to teach the ordinary reader how to distinguish between these various disorders, because he probably has no knowledge of anatomy. A hydrocele may be quite small, or it may swell to the size of a pumpkin. It is *not painful, or tender, or red*, though it may feel heavy. It is, when large, a pear-shaped swelling with the pointed end towards the groin. In congenital hydrocele the bag of liquid can be gradually emptied through the neck of it into the abdomen, and fills up again

when the patient stands up. The testicle is not interfered with and can be felt at the back part of the lower end of the swelling.

Treatment.—In hydroceles in children a truss must be worn to encourage the closing of the opening between the purse and the belly. Some surgeons then irritate the skin over it with iodine, and this makes the fluid absorb. Others tap the little tumor and withdraw the liquid. After that the hydrocele generally gets well of itself. But in adults a truss is of no use, and either the hydrocele must be tapped regularly as soon as it is too full to be comfortable, or else an operation must be done which just removes the “wall” of the bag of fluid and then there can be no more dropsical swelling for there is no place for it to collect in. Hydrocele is not dangerous, nor is the operation for it a dangerous one.

Hypochondriasis or Neurasthenia.—This long scientific and medical word is the name of a complaint which is very common amongst us, though you may never have heard this long word before. It is a condition of the mind in which the sufferer is always fancying that he is in some way out of health, and he makes himself miserable about it.

Most hypochondriacs are in the possession of very fair health indeed; in fact, there is seldom very much the matter with them except a disordered fancy. But they are so selfishly wrapped up in their fancied ailments that they hardly enjoy life at all. They really do suffer, from—nothing in particular! But their sufferings are real enough to them, and we should pity them because they have not the strength of purpose to throw off their morbid fancies. There are plenty of hypochondriacs among middle-aged men, especially such as have got on in business, and have not very much hard work to do. There are plenty of young men also in the same category. They look at their tongues in the glass every morning; they dose themselves continually; they read the long accounts in the advertisements of patent medicines, and they believe every word they read. If a cold bath is advised, they take a cold bath; if a cold bath is said to be injurious, they cease taking a cold bath. They study all their insignificant little sensations, and read up medical books, to try and find out what is wrong with them. They suffer agonies of worry and trouble because of the little knowledge which is to them so dangerous a

thing. Some of them fancy they have this complaint, some that; and every little sensation makes them believe they are in for some serious disease. They buy a clinical thermometer, and tabloids, and tonics, and take everything and anything—except what a doctor advises. They never stick to one doctor; they go from place to place looking for a doctor or a patent medicine advertisement which will understand their terribly complicated case! There are many women in the same condition, especially those who have no work to do and plenty of time to do nothing in. Some few of them are curable. They want plenty of beef steak, bitter beer, and wholesome stale bread and cheese; they should avoid pickles and indigestibles, and they should take long walks or get a muscle developer and use it. But their minds really require more treatment than their bodies, and they should work hard at anything which will give them no time to think of Number One! Carlyle's advice to all such people is excellent:—"If you are not miserable, be happy"—there ought to be no half-way conditions.

Hysteria.—This is a large subject, and it is impossible for us to do more than give an outline of it. By Hysteria we mean a curable nervous disorder which leads to various disturbances in health, such as numbness, pain, paralysis, flushings, palpitations, and others too numerous to mention. A person who is subject to these more or less avoidable and self-caused symptoms is said to be hysterical and to have hysteria; every attack of such symptoms is called an *hysterical attack* or *fit of hysterics*. Clearly understand that hysteria is real disorder of the controlling centers of the brain; it is not *shamming*, though an hysterical girl generally shams as well.

Most hysterical people are girls in their teens, but some women are hysterical all their lives. Boys occasionally have hysterical attacks, and even men are sometimes subject to them. The tendency to hysteria is increased by bad or weak moral training, especially by mothers who "cosset" their children and lead them to expect undue sympathy in every little trouble. The hysterical patient has no "backbone," no "grit," as we say: she is "namby-pamby" and silly. We have to consider, then, what are the signs of *hysteria* and what are the characters of an *hysterical fit*.

Hysteria.—The girl or woman with hysteria is emotional and perhaps very sentimental. She laughs or cries without

sufficient reason. She wants to be taken notice of all the time. Without sympathy she is miserable, and the result is that she will (in bad cases) do or say *anything* which will procure sympathy and fussing. She may even produce illness in herself, swallow stones or needles, or make eruptions on her skin with acids or poisons in order to deceive her doctor, and excite his and others' interest and sympathy. In worse cases, she begins to fancy that she cannot move an arm or a leg, and at last, having made herself believe that she can't move it, she finds that she is really paralyzed. Or she may become voiceless, or rigid, or go to sleep for weeks, or go without food for weeks, with or without a religious motive. Sometimes the senses of an hysterical woman get so acute and sensitive that she cannot bear the light of day and complains of the least touch or noise. Her spine is very likely tender, and she has tender spots in various places—especially (1) at the top of the head, (2) below the breasts, and (3) on each side of the abdomen.

Sometimes the symptoms vary from day to day, for the hysterical woman will soon find a new complaint if sympathy seems to be on the wane. She cannot bear to be forgotten and she loves to be pitied, though she will often say that she wants *no* sympathy!

The *causes of hysteria* are many; among them are:—bad moral and emotional training of the young, masturbation, sexual excesses, impure literature, lack of physical exercise and fresh air, *anæmia*, disappointment in love, loss of social position, emotional shocks, grief, and so on.

An *hysterical fit* is something like this:—the girl or woman begins by laughing or crying, or doing both at once, and complains of a feeling as if a *ball* were rising into the throat and making a choking sensation. Then she falls down “in a fit,” and seems to be quite unconscious, but may recover quite suddenly, especially if no notice whatever is taken of her, or if someone says aloud that he is going to drench her with cold water. But the forms of hysterical fits are very numerous, and we cannot say more about them here.

Treatment.—Slight cases of hysteria can be treated at home, hysterical girls who *fast*, *sleep* for days or weeks, are *paralyzed*, *erotic*, or subject to *trances*, must be treated in a suitable institution. The home treatment of hysteria is

not difficult if the parents and friends are sensible and not sentimentally foolish. The girl needs plenty of rest, good food, moderate exercise, laxatives for the bowels, iron tonics for the blood—but no fussing or sympathy. Special symptoms, such as pain, need medical advice.

As to the *fits*—in slight attacks no treatment is needed. The girl or woman must be encouraged at other times to exert self-control, but when the fit comes *leave her in a room quite alone*. Or watch her, if you are anxious, but only if you can do it without her knowledge. She is very sharp, and if she finds out you are watching, her fit will get worse and worse. Yet she is not shamming, she is suffering from a mental disorder. The mere mention of a jug of cold water will generally cure her, because dislike of a cold douche or the application of strong smelling salts to her nose forces her to exert self-control. But if the name “cold water” does not cure her, pour it over her, or dash the water in her face without hesitation. The essential thing, between the fits, is to make her understand that you are sorry for her, but that she shall have no sympathy unless she tries to control herself.

Idiosyncrasy.—This word implies nothing more than “personal peculiarity,” and is used by doctors with reference chiefly to the effect of medicines. Some people cannot, for example, take even five grains of iodide of potassium without getting watery eyes and all the signs of a cold in the head! Others can take twenty grains of the same drug, three times a day, with benefit. The same peculiarities apply, of course, in the case of alcohol, arsenic, shellfish, eggs, porridge; some people like these things and some cannot take them without feeling ill. Many people get singing in the ears and giddiness from even small doses of quinine; others take quinine to cure noises in their ears! “One man’s meat may be another man’s poison,” says the old proverb, and it is a very true one. This makes it difficult to find a good definition for *poison*. Powdered glass if swallowed, will probably cause death, and so might boiling water, but one cannot call these things poison. One man can take a quarter of a grain of morphine with nothing but a feeling of drowsiness, whereas the same dose would be fatal to many women and most children.

The moral to be drawn from all this is to avoid buying and swallowing tabloid medicines without a doctor’s pre-

scription and advice, just because someone (non-medical, like yourself) has said that they are "good for" your complaint. In health, certain medicines (like morphine, atrophine and aconite) are actually poisonous; in some forms of disease, and with some idiosyncrasies, they are beneficial, and may even save life!

Imperial Drink.—For persons with feverishness or any acute feverish disease, and for those with Bright's disease, who suffer much from thirst. Pour a pint of boiling water on a large teaspoonful of cream of tartar, a little sugar, and a few bits of lemon peel. Strain when quite cold and serve.

Impotence.—Let no one hesitate to consult a doctor. A young man may imagine that other young men are not troubled with these matters, but really they are very common, and the doctor has heard the whole story before, many a time, and is quite well able to tell you how to deal with it.

Indigestion.—So very many persons are always suffering from chronic indigestion, that we feel obliged to refer to this subject at length. Some have dyspepsia, or indigestion, because the digestive organs—the stomach, bowels, or liver—are diseased; others suffer because they eat either too much, or eat unwholesome food; while a third group of patients suffer indigestion because they drink to excess. Habits of chronic intemperance are sure to ruin the coats of the stomach, and to harden the liver, sooner or later, and very often injure the kidneys as well. In the early days of free drinking a change to total abstinence is often quickly followed by a complete recovery; but when alcoholism has destroyed the liver cells there can be no recovery of good digestion. Apart, however, from alcoholic drink, the consumption of too large a quantity of food, and especially the habit of taking meals too close together, may render a state of healthy digestion impossible. The stomach needs rest as much as the mind, or the body in general; it ought to empty itself into the intestines, and remain empty for one or two hours between each meal. Almost all of us eat too much; that is, we eat more than is needed to supply energy and to keep up the body weight. Persons in poverty who cannot get enough to eat rarely suffer from indigestion. Most people are all the better for an occasional day of fasting, say, once every month. The Roman Catholic Church was wise in making all Catholics fast on one day every

week, and also live sparingly for forty days every year in Lent, which happens in the springtime. When indigestion is the result of organic disease of the stomach or liver, or when it is an accompaniment of consumption, there will be great difficulty in curing it. Medicines may have to be taken for months together, and seem to have very little effect in giving relief. The usual symptoms are deficient appetite, unpleasant taste in the mouth, oppression felt in the chest after food, and this may last for hours (*see also* "Acidity"); pains in the chest, flatulence, and belching upward of wind or gases. Some persons also have waterbrash and heartburn, also occasional nausea and vomiting; the action of the bowels may be either relaxed or too constipated, and there may be piles. The treatment of indigestion must vary with the peculiarities of the patient and with its cause. (*See also* "Salisbury Treatment.")

Very few people will take the trouble carefully to study even a popular work on Indigestion, and so they go on suffering for years, and only learning by bitter experience how to avoid the chief troubles of dyspepsia by avoiding the foods (sometimes) that they most enjoy! We have decided that our best plan is not to describe the types of indigestion but to resort to the method of giving a list of the principal symptoms and hints as to how to deal with them. Of one thing be certain—the cure must be by means of proper diet, not by drugs.

Heartburn (*see article on* "Acidity").

Flatulence (Wind in the Stomach, Belching, Fullness after Food).—It is a mistake to belch, or to try and "raise" the wind; more air is swallowed and the distress only increases. A little dried Poplar Charcoal (say 5 grains, with 5 grains of bismuth subnitrate) swallowed in a cachet just before each meal is very useful. A few drops of essence of ginger, of peppermint, of cloves, or of cajuput at meal-times are often serviceable. Pepsin and papain in large doses are also good for flatulence. Soups, eggs, starches, fruits, vegetables, should be eaten sparingly. A dry meat diet is often best.

Waterbrash.—This is a gush of acid fluid (chiefly saliva) which comes into the mouth after an attack of pain in the stomach.

Try the following mixture:—Sodium bicarbonate, 15 grains; magnesium carbonate, 10 grains; compound carda-

moms tincture, 1 drachm; aromatic spirit of ammonia, $\frac{1}{2}$ drachm; caraway water to one ounce. The draught to be taken occasionally.

Flushing after meals.—Take a one-grain pill of creosote made with soap, after food, thrice daily. Or, a half minim creosote pill.

Vomiting.—The cachets of bismuth and charcoal above mentioned are useful.

Foul breath.—Sodium bicarbonate, 10 grains; carbonate of bismuth, 5 grains; tincture of chiretta, 10 minims; infusion of quassia, $\frac{1}{2}$ ounce. Take this draught half an hour before each meal, and look well to the state of mouth and teeth.

Infant Feeding.—No other one factor in the health of an infant compares for a moment in importance with the manner in which it is fed. Breast feeding may be more difficult to carry out than bottle feeding; but according to Holt the mortality of bottle-fed infants during the first year is fully three times as great as that of those who are breast fed.

Dr. Winter says that while very few breast-fed infants die, the mortality of bottle-fed infants in tenements and institutions may be as great as 59 to 93 per cent.

These figures apply to those cases where our modern knowledge of artificial infant feeding is not applied. With care these percentages can be much reduced; but no matter how perfect our methods of artificial feeding are they can never equal, in their results, the effects of breast feeding.

Breast Feeding.—During the first day the infant need have nothing but water.

Little milk is secreted by the mother until the third day. The number of daily nursings and the intervals are shown by the following table (from Holt).

| Period | Nursings in 24 hours | Interval by day hours | Night nursing (10 P.M. to 6 A.M.) |
|-----------------------|-------------------------|--------------------------|--------------------------------------|
| 1st & 2nd day | 4 | 6 | 1 |
| 3 days to 6 weeks . . | 10 | 2 | 2 |
| 6 weeks to 3 months . | 8 | 2½ | 2 |
| 3 to 5 months | 7 | 3 | 1 |
| 5 to 12 months . . . | 6 | 3 | 0 |

The mother should have a simple but generous diet with plenty of fluids. Eggs, cereals, soups, vegetables, meat once a day, gruel, milk, or cocoa at bedtime.

She should avoid worry, anxiety, fatigue, social dissipation, grief, excitement, fright and passion.

There is no objection, after the first few months, to substituting bottle feeding for some of the breast feedings. Weaning should be begun gradually at nine or ten months and completed at one year.

Artificial Feeding.—Milk for artificial feeding should come from healthy cows and be clean and fresh.

It is preferable if it is "certified," pasteurized, or both.

In making up the following formulas (according to Holt) 7 per cent. milk is used. This is obtained by removing the upper half from a quart bottle of milk which has stood at least four hours. It can also be obtained by mixing three parts of milk and one part of ordinary (16 per cent.) cream.

Nine formulas are employed for different periods of the child's development.

They are made as follows:—

| | I | II | III | IV | V | VI | VII | VIII | IX |
|--------------------|-----|-----|-----|-----|-----|-----|-----|------|-----|
| | oz. | oz. | oz. | oz. | oz. | oz. | oz. | oz. | oz. |
| 7-per cent. milk | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Milk sugar | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Lime water | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Boiled water .. | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 |
| Totals | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |

Formula I is begun on the second day; II on the fourth day; III at ten to fourteen days; but after that the increase is made more slowly. A healthy infant with good digestion will be able to take formula V by the time it is three or four weeks old.

Formulas from 7 per cent. milk can be continued until the child is six or seven months old. Then a change should gradually be made—using whole milk. Instead of removing the upper 16 ounces, one may for two weeks remove the upper 18 ounces.

For the next two weeks remove the upper 20 ounces and for the next two weeks remove the upper 24 ounces.

After this the bottle may be shaken up and the whole milk used (Holt).

For artificial feeding of infants during the first year the following table will be of service.

| Age | Interval between meals by day | Night feedings 10 p. m. to 7 a. m. | No. of feed- ings in 24 hours | Quantity for one feeding | Quantity for 24 hours |
|-----------------------|--|---|---|--------------------------------|-----------------------------|
| | Hours | | | Ounces | Ounces |
| 2nd to 7th day ... | 2 | 2 | 10 | 1-1½ | 10-15 |
| 2nd & 3rd weeks .. | 2 | 2 | 10 | 1½-3 | 15-30 |
| 4th & 5th weeks .. | 2 | 1 | 10 | 2½-3½ | 25-35 |
| 6th to 9th weeks .. | 2½ | 1 | 8 | 3-5 | 24-40 |
| 9th week to 5th mo. . | 3 | 1 | 1 | 4-6 | 28-42 |
| 5th to 9th month . | 3 | 0 | 6 | 5-7½ | 30-45 |
| 9th to 12th month . | 4 | 0 | 5 | 7-9 | 35-45 |

The entire amount for the 24 hours should be made up at one time, placed in bottles containing the exact amount for a single feeding and pasteurized.

At the end of six months a little farinaceous food may be added to the diet—also a little beef juice, the white of an egg and orange juice.

For vomiting the amount of milk must be reduced, or the fat content of milk should be reduced and the lime water increased.

For colic or constipation strengthen the formula, substitute milk of magnesia for lime water or replace milk sugar by maltose.

For diarrhea diminish the fat content of the milk, boil it and dilute it if undigested milk appears in the stools.

The best forms of pasteurizers are the Freeman and the Walker-Gordon.

As soon as the bottles are emptied they should be rinsed with cold water and allowed to stand filled with water to which a little bicarbonate of soda has been added. Before the milk is put into them they should be thoroughly washed with a bottle brush and hot soap-suds and then placed for twenty minutes in boiling water.

Feeding during the Second Year:—

Five feedings a day should be given with milk at 10 P. M. if the child is awake, from the bottle.

The following are given until the fourteenth month—

milk with gruel, orange juice, beef juice, white of egg and mutton or chicken broth.

From the fourteenth to the eighteenth month the following are given:—milk (warmed), fruit juice, oatmeal or hominy with cream, dry toast, beef juice, egg, rice, broth and scraped beef.

After this, until the end of the second year, may be added beefsteak, mutton chop or roast beef, prune pulp or baked apple.

Feeding during the Third Year:—

The night feeding at 10 P. M. should be omitted. The midday meal should be increased. Three regular meals should be given and milk once besides.

To the second-year diet may be added baked white potato, boiled rice or spaghetti, asparagus tips, string beans, peas and spinach—all cooked until soft and mashed.

Condensed milk and proprietary foods.—If these foods are used to correct symptoms of indigestion they should be used for a few weeks only.

Most of them are low in fat and proteids and high in sugar.

Children fed upon them for too long a time are liable to develop rickets and sometimes scurvy.

Infantile Paralysis (Acute Anterior Poliomyelitis).—This is an acute disease characterized by the rapid onset of paralysis with fever. While it is usually confined to infants and children, adults may also contract it. It is most prevalent in summer and has recently been occurring in epidemic form. The paralysis is most common in one or both legs, but the arms may be affected. After a mild attack the paralysis may disappear entirely. In all cases some of the paralysis disappears, but as a rule the paralysis which remains is sufficient to cause considerable deformity and disability. In addition to the paralysis and fever, there may be pain and tenderness, headache, restlessness and muscular twitching. Few cases die.

Infantile paralysis is a disease due to a germ so small that it has never been seen, which attacks the spinal cord and produces local injury there.

Early treatment consists of rest in bed, counter-irritation over the spine and local antiseptics of the mucous membranes of the mouth and nose. Later the services of an expert physician are most necessary to prevent deformity by means

of electricity, massage and the use of mechanical appliances.

Since 1907 when the first large epidemic occurred in this country in and near New York City the disease has been spreading rapidly until during the past year there have been epidemics in 31 states.

Prevention.—As the disease is communicable and to some extent contagious, all cases should be isolated for at least a month—as the disease germ has been found in the secretions from several weeks to several months.

While the exact modes of transmission are not yet known there is a suspicion that it may be caused by flies, fleas or street dust. It may be carried by a person who has been exposed even if not a sufferer. As the most common point of entry of the germ into the body is the mucous membrane of the nose, not only should all nasal and oral discharges of the sufferers be disinfected and destroyed, but those exposed (and we are all constantly exposed) should cleanse their nasal cavities and mouths several times daily with some mild antiseptic solution such as *Liquor Antisepticus Alkalinus*.

While monkeys have been immunized, it has not yet become practicable to immunize human beings. One attack protects from subsequent ones.

Inflammation.—(*See* “Abscess.”)

Influenza is an epidemic fever, accompanied always by catarrh of some part of the body or other. It begins about a week after infection, and it begins suddenly, with a rapid rise of temperature, which it needs no clinical thermometer to prove. The feverishness lasts nearly a week in ordinary cases, and ends suddenly in an attack of perspiration. There are at least four quite different types of influenza, and the same poison, whatever it may be, seems to cause them all. Everybody who catches influenza has three symptoms—feverishness; “cold” in the head, nose, eyes, throat or chest; and extreme prostration. But some people have other things added to these: for example, bronchitis and pneumonia; or palpitations, flushing, fainting, sweating and gasping; or diarrhea, vomiting, jaundice; or skin eruptions; or mental troubles. Everything depends upon which part of the body is attacked. There is very seldom a rash, but there may be a rose-rash which soon fades. Nearly every case of influenza which is going to

be serious is accompanied by dreadful pains in the head, back and limbs.

Influenza is infectious and epidemic, and it is due to a germ, which is coughed into the air and is inhaled by sufferers. You may have numerous attacks; one attack does not protect you from a second. Old and young, poor and rich, all stand a good chance of being attacked during an epidemic.

The first thing to do when you are seized with influenza is to send for the doctor. He will know how to nip the mischief in the bud, if it ever can be thus nipped, and the earlier treatment is begun the better chance you will have of escaping lightly. Only about one person in a hundred cases dies of influenza, but many, very many, are left prostrate for weeks, if not months, afterwards, and many are never the same again after an attack. So do not waste precious hours in self-doctoring, or you may regret it all your life. In middle-aged and elderly folks the attack is only too likely to be complicated by pneumonia (inflammation of the lungs). In younger people, an attack of influenza is often trivial and recovery occurs in a few days. But it will not do to presume too much on one's former health and strength; and relapses are quite common.

You must keep the patient in bed during the attack; and until the doctor comes you may give a teaspoonful of ammoniated tincture of quinine every two hours, and some strong beef tea and good cognac brandy in it. Do not let him take antipyrin or any such strong medicine without medical advice, lest you damage his heart, which will require all the power it possesses if complications should arise. Afterwards, a tonic will be required. If possible a change of air and a thorough rest should be undertaken.

Insanity.—Not very many years ago a madman or madwoman got very little sympathy, and was locked up in an insanitary madhouse, looked after by ignorant and often brutal attendants, and hastened to death, or worse forms of madness, by neglect, cruelty, starvation, or accident. If the mad person were raving, noisy, and destructive, he was tied down, confined in a dark room, or half-smothered with clothes. If he believed himself persecuted by poisoners, he would refuse all food, and then would probably be left to starve. If he were depressed and melancholic, he would be left alone, and shunned and neglected. If he were in-

clined to commit suicide very little trouble was taken to prevent his doing so, and sooner or later he generally succeeded. If he were homicidal, he would be chained up, and, if he were a person of no importance, would probably be utterly neglected, and die of some disease caused by unhealthy surroundings. A great many cunning lunatics were able to conceal their disorder, and keep out of asylum, because of the ignorance of doctors, as well as of the public, on the subject of mental disease.

In this way anyone who became so insane as to require to be locked up, became at once a disgrace to the family—a skeleton in the cupboard whose existence was concealed at any cost, and a stigma on all the relations. If a man had cancer, or was a drunkard, he was pitied or despised; but if his mind gave way, he was shunned, and ran the risk of dying of neglect. He was thought by the ignorant pious to be possessed of a devil, or to be a wizard or a witch. A madman rarely recovered, for his unmerited sufferings increased his madness, and to the tortures of mental pain were added the unkindness (often ignorant rather than intentional) of those sane and well.

At the present day the lot of the insane is very greatly improved, and mental disease is a department of the study of medicine in which very great progress is being made. It is probably true that at no period of the world's history have the needs of the mad been so well understood and catered for as at the present day. Of late years the study of madness has been recognized as the province of the physician, and not of the lawyer, or clergyman, or mad-house keeper. There are a great many things connected with lunacy which are still in the hands of lawyers, and plenty of instances where the attitude of the Law towards criminals who are mad, rather than bad, or who are both mad and bad, is manifestly unjust and wrong. Still, things are improving, and it is the medical expert who generally decides as to the alleged insanity of a criminal, though it is the judge still who apportions the responsibility.

Just as in all other branches of the art of medicine, so in the science of mental disease—people who are quite ignorant of the subject are apt to express opinions about patients who are said to be mad. And the reason of this is that madmen do not necessarily act on all occasions in a different manner to the sane. You might easily pass

through an asylum without chancing to see anyone at all whom you would consider insane, and yet every one of the patients there is mad. And there are a great many varieties of the disorder, each with special signs, which you can only recognize when you have been taught to do so. This will explain how it is that madness requires special study, and why it is that madmen must be kept for care and kind treatment in a suitably-appointed asylum, and submitted to the wholesome routine that is there carried out. Those who have had absolutely no experience of either asylums or the insane are very apt to think that it is terrible to "lock up" an insane person in an asylum; but no kinder thing can be done to a madman than that. And for these reasons:

Nowadays asylums are all visited by officials of the Government of the very highest standing, and it is their duty to report on what they see in asylums for all the world to know. At the head of every asylum is a physician of special knowledge in the treatment of insanity. Under him are other physicians, who assist him and train the attendants, so that the patients shall not be in the care of ignorant, and possibly unkind, men and women.

The utmost care is taken of the mad people, and the physicians report on their condition regularly to the Government. As soon as a madman recovers, and he is well enough to be at large, he is discharged—a free man. The rooms and corridors are warmed, the food is excellent, and the management of the patients is in skilled hands. So you see that everything is done to alleviate the sadness of madness. Entertainments are provided, and in some places recovery is accelerated by giving all the patients suitable work to do; for work is the grandest thing to keep you in good mental health. The lot of the insane person at the present day is made as comfortable as possible; formerly, as I have shown, the mad were ill-treated, as if they were evil or criminal, and the treatment soon made them both.

But while we may congratulate ourselves on our growing knowledge, wisdom and kindness towards the unfortunate, we are possibly too lenient and forbearing—not towards poor suffering mad people, but towards the sane as well. For a lunatic is not as other people are, even if he recovers; he is always liable to relapses, and yet when free of the asylum he may marry and have children, and there is

always a risk that he will transmit to them some taint or other—madness, alcoholism, or some other dread disease.

The Varieties of Madness.—Insanity, or the state of madness, is the condition of unsoundness of mind which is the opposite to sanity, which means that state of mind which makes men and women able to carry out their duties to their fellows, and to behave properly in their own interest. There are cases of insanity of very different forms, and they may be classed and considered in many ways. Infants may be born mad, and are then called idiots; or insanity may come on at every period of life, even in extreme old age. Indeed, old age has a special form of madness, called Dementia, or a return to a childish state of mind. Insanity may be inherited or acquired. Madness certainly runs in some families, and sometimes comes on about the same age and in similar form in one generation after another. It can be acquired by head injuries, by drunkenness, by debauchery, by shocks to the mind, from extreme grief, and from horror. Long-continued, severe pain and starvation will also send people mad. *A long series of epileptic fits may end in insanity.* The usual forms of insanity which occur in middle-life to persons who have been in good health are three—Mania, Melancholia, and Monomania. Mania means madness in which violence predominates, or, at any rate, the form in which patients have attacks of violence. It is called raving madness. It is marked by loss of common sense and memory, with delirium, restlessness, and sleeplessness, self-neglect, senseless anger, distrust of others, shouting and howling for hours together. The maniac is mischievous and destructive, and may attack others or kill himself. Melancholia comes on gradually, with depression of spirits, fear, and a sullen, morose state of mind. Such patients seem unwilling to say or do anything, and sit for hours vacant-minded or in mental agony. They sometimes refuse food, and try to starve themselves, and may attempt suicide in many ways. Melancholic persons may also develop murderous tendencies, and sometimes try to set fire to furniture and buildings. The worst cases of melancholia are those which begin from extreme religious devotion. Monomania is the name given to those forms of madness in which the patient has some settled delusion or mental crank, and may yet be able to speak and act sensibly in ordinary matters. For example, monomaniacs may think

themselves kings, or made of glass, or that they have some divine work set them to do.

That form of insanity in which the sufferer has constant fixed delusions is called *paranoia*. This is one of the commonest forms of insanity in this country.

Treatment.—To conceal a person's insanity is to commit an action which is both unkind to the patient and a crime on the whole public. The earliest possible removal to an asylum is of the utmost importance, and every day's delay may diminish to some extent the chance of his restoration to health. There is not much to be ashamed of in having a *mad* person in the family as a *drunkard*, for instance; but, in any case, asylum treatment is his only chance of recovery.

Prevention of Insanity.—The importance of preventing insanity is appreciated when it is realized how rapidly insanity is increasing—(104 per cent. during the last decade in New York State, where one-sixth of the total expenditure of the State is for the insane.)

Insanity is due, in a majority of cases, to causes which are known and preventable. The 32,000 persons now in hospitals for the insane in New York State might have remained sane and lived useful and happy lives if they had known certain facts and acted accordingly.

Of the preventable causes the following are the most important:—

Immoral living, alcohol and other poisons, certain physical diseases, bad mental habits and heredity.

Immoral living is extremely liable to result in the contraction of syphilis, which may produce, among other diseases, softening of the brain—the cause of 25 per cent. of all insanity. Every man and boy should know that by yielding to the temptation to go with immoral women he is exposing himself to the probability of getting this disease, which may result, years after, in incurable insanity.

Alcohol.—Forty per cent. of all insane cases are due directly or indirectly to alcohol even in “moderate” quantities not producing intoxication.

Other poisons capable of producing insanity are opium, morphine and cocaine.

Physical diseases which may be followed by insanity are typhoid fever, influenza, diphtheria, tuberculosis, and diseases of the arteries, heart and kidneys. A person suffer-

ing from these diseases should have good nursing, skilled medical treatment, pleasant surroundings and freedom from anxiety. Physical diseases may be prevented or controlled by protection of food and water, temperance, healthful homes and factories.

Hard work alone rarely causes a nervous breakdown. It only becomes a menace to health when associated with worry, loss of sleep, etc.

Bad Mental Habits.—The healthy state of mind is one of satisfaction with life. This does not depend so much upon our surroundings or how much money we have, as upon the way in which we train ourselves to deal with difficulties and troubles. "Stone walls do not a prison make, nor iron bars a cage."

Anyone who departs too far from this state of satisfaction must be regarded as tending towards an unhealthy condition.

The average person little realizes the danger of brooding over slights, injuries, disappointments, or misfortunes, or of lack of frankness, or of an unnatural attitude towards his fellowmen, shown by unusual sensitiveness or marked suspicion. Yet all these unwholesome and painful trains of thought may, if persisted in and unrelieved by healthy interests and activities, tend toward insanity. Wholesome work relieved by periods of rest and simple pleasures, and an interest in the affairs of others, are important preventives of unwholesome ways of thinking.

We should train ourselves not to brood, but to honestly face personal difficulties. We may not like even to admit the existence of these difficulties, but they are often the real cause of the brooding. *To start doing something*, to change the situations about which we fret, is the healthiest way to avoid aimless fretting. We should not hanker after the impossible, but learn to get satisfaction from what is at hand. We should not give ourselves up to day dreaming, but try to do something, no matter how small it is.

Heredity.—We cannot choose our parents, but we can do much to insure the health of our offspring. On the other hand we can accomplish much by not worrying unduly about insanity in our ancestors. Insanity is not directly inherited. One may inherit a greater or less tendency toward insanity. Mental instability may be inherited just as weak constitutions may be inherited.

Those who have reason to believe that there was mental disease in their ancestry should not be unduly alarmed. The fact that some of their ancestors suffered from mental trouble does not make it certain that they will suffer likewise. These tendencies towards insanity may lie dormant during the whole lives of the individuals. But such persons should take the proper precaution to prevent the development of this tendency. As a weak constitution may be built up by healthful habits, so may mental instability be made stable by good mental and physical habits. The individual whose family has bad mental trouble may often escape the disease by proper surroundings, healthful and temperate activities, and proper mental and physical habits. The most important fact in heredity is that the vast majority of ancestors of every individual were normal.

Heredity tends, therefor, rather more strongly toward health than toward disease.

The fact that heredity plays a part in the causation of insanity, should create a public conscience regarding marriage. Marriages should not be contracted by two persons who have insanity or feeble-mindedness in their immediate families, without first seeking the advice of a competent physician.

Insomnia.—(SLEEPLESSNESS.)—No one can remain many days without sleep, but many persons do not sleep so long as they would like to, and many persons do not sleep as much as their health needs. The doctors describe a special form of disease named insomnia, which means wakefulness occurring when sleep ought to be present. It may be due to disease of the mind, or of the brain, or of the body, and may itself give rise to other diseases. Absence of sleep is very rarely complete even for twenty-four hours, but want of quiet, restful, continuous sleep is a state from which most people suffer at some time or other. It is very well known that there are drugs which will produce sleep, or, at any rate, will bring on insensibility, or a form of sleep, and these drugs are called *sedatives* or *narcotics*. It is, however, very bad policy to give any doses of such medicines until you have tried the removal of all possible causes for the wakeful state, because in most patients there is some definite cause for it, and when the cause is taken away the patient sleeps well. Sedative doses strong enough to compel sleep should be avoided also because they dis-

order the stomach, disturb the digestion, make the tongue dry and coated, and cause an unnatural thirst; the appetite is also lost. Sleeplessness may show the presence of *fever*; it may be due to *pain*, to *shortness of breath*, to *palpitation* of the heart, or to *delirium*, especially the delirium of drunkards. Simple sleeplessness does sometimes occur in the absence of any of these serious causes; it may be due to a state of *worry* or *irritability of the mind*, pointing to a congestion of the brain. Some forms of *indigestion* will cause it, and in this matter people vary very much, for some cannot sleep after a heavy supper, while others lie awake if they have an empty stomach. Persons who lead lives of bodily work carried on in the open air generally sleep very soundly, while persons who work in the close, unhealthy rooms in factories often have restless nights. Over-fatigue may cause restlessness, and so anxiety of mind can destroy all chances of sleeping. Literary workers, and also persons who lead useless, frivolous lives, often sleep very lightly, and go to doctors for sedatives.

But all attempts at classifying the causes of sleeplessness are very unsatisfactory, and the subject might be dealt with adequately only in a couple of thick volumes. We have mentioned above eight of the commonest causes of sleeping badly. Others are cold feet, tea-drinking at bedtime, lack of food, heart disease. The first thing to do, then, if you sleep badly, is to find out why. Have your room dark and quiet, and see that your feet are warmed. (See also "Sleep, Hints on Obtaining," in this volume.)

When we come to consider drugs we tread on dangerous ground. The people who suffer *most* from sleeplessness are not those who do some work in life, and fill their hours in some profitable way, but they are those who idle and lounge, or live frivolously, and those who drink and eat too much. These people are already self-indulgent, and to tell them to drink a little alcohol, or to take a little narcotic at bedtime, is only to give them an excuse for another bad habit. Chloral, morphine, alcohol, and the rest, spoil a good many lives from over-indulgence. The most harmless sedatives are the bromides, which may be taken, if necessary, for years. Thirty grains of bromide of ammonium should be taken an hour before bedtime in mild cases of sleeplessness, and until this plan has been given a good trial, no other sedatives should be used. A very safe drug

is bromural in a dose of 10 grains, taken in a little hot water and sugar at bedtime.

Itch is a skin disease caused by the presence of a species of mite which lives, male and female, on the skin, and burrows into it. The female itch-insect leaves her eggs in the burrows and they set up an intolerable itching and irritation. The commonest places for these burrows are the webs between the fingers and toes, the front of the wrists, and women's breasts; and never are they seen on the face, except sometimes on children in arms. There is generally a little tiny pimple which marks the mouth of each burrow, and a little track can generally be traced by the thin line of dirt which fills it. So that almost anyone can discover the signs of the presence of the insect. If you rub weak sulphur ointment into the burrows so thoroughly as to get into every cranny and nook, for a few days, the insects will die, and the disease will be cured. But in cases where the itch occurs on parts of the body which are covered up, disinfection of the clothes must be undertaken, and the patient must take baths, and use soaps and lotions which must be ordered by the doctor according to the merits of the particular case. So far, so good. But many people who contract the itch scratch the skin wildly, and as the finger-nails are not always clean, the scratched skin soon has a number of sore places on it, all more or less "poisoned" by the patient himself, who very likely spreads the disease all over his body by mere scratching. With regard to the cure we must say that mere smearing of the ointment on the place is of no use; on the other hand, you need not be so vigorous as to inflame the skin with it. If there is only *itch*, you may cure it with stavesacre ointment, or weak sulphur ointment, after a hot bath, in which use soft soap. For the itching a lather of menthol soap is the best thing. But where the skin has been rudely scratched, and is a mass of tender places and sores and scabs, it is a case for the personal attention of a doctor.

Itching of the Skin of Various Parts.—There are two distinct ailments in which the sufferer complains of itching of the skin. One is *prurigo*, a non-contagious skin-eruption of small pimples, causing intense suffering, and very difficult to relieve. It has nothing to do with the disease called the itch, and is really a disease of old age and caused in some mysterious way by the slow "decay" of the skin itself.

This ailment we shall say no more about. The other ailment, which must not be mixed up with prurigo, is called *pruritus*, and means "an itching."

Pruritus is not a disease, nor is it a skin-eruption, but only a sign or irritation of the skin caused by something which it is the doctor's duty to find out before he can set to work to relieve it. The causes of the itchiness of the skin which we call *pruritus* are:—

(a) Local causes—

- (1) Dirty habits; lack of washing.
- (2) Lousiness (*see* "Lice").
- (3) Ringworm.
- (4) Eczema.
- (5) Irritating woolen underclothing.
- (6) "Prickly heat" (a sweat eruption which some people get in very hot weather).

(b) General causes—

- (1) Diabetes (which *see*).
- (2) Jaundice.
- (3) Piles, which cause much itching at the anus.
- (4) Diseases of the womb often cause itching due to the irritating discharges.
- (5) Pregnancy. Many women have terrible itching towards the end of child-bearing.
- (6) The change of life in women (*see* "Change of Life").
- (7) Worms in the intestines.

Now, whatever be the cause of the itchiness, it gets worse when the patient gets warm in bed.

Treatment.—First, insist on thorough cleanliness and bathing. Eczema, if present, wants special treatment (*see* "Eczema"). Diabetic itching is relieved by sponging the parts daily with Goulard lotion. Or the following may be painted on with a brush—menthol, 1 part; olive oil, 5 parts.

Baths are especially comforting to itchy skins.—The conium and starch bath—Extract of conium, 120 grains; starch powder, 1lb.; hot water, 30 gallons. (After this bath, sprinkle the skin with starch powder.)

The Sulphuret bath—Sulphuret of potash, 4 ounces; hot water, 30 gallons.

Caution.—Not to be taken if there be sore places from scratching.

Kidney Diseases.—The kidneys are two organs lying in the lower part of the back (the loins), and their duty is to get rid of the waste matters in the blood. The water which the kidneys secrete passes down two little tubes into the bladder and remains in the bladder until that vessel is uncomfortably full when it is passed away through the *urethra* or pipe.

A healthy person passes *about fifty ounces* (two and a half pints) of urine every day. In cold weather, more; in hot weather, less, because the skin gets rid of a lot of water by perspiration. Healthy urine is pale amber-colored and has no deposit. But let none of our readers pay too much attention to the urine. It varies very much in color and in quantity even in good health. A pinkish sediment in urine that has been standing and has got cool in the chamber, is very common, and is of no importance. It probably means that you have a slight cold, or that you are eating too much meat. Many medicines color the urine; rhubarb makes it very yellow, asparagus makes it smell aromatically; and so on. If the state of your urine troubles you, take a little bottle of it to a doctor and ask his opinion. Don't take "kidney pills," or other self-prescribed medicines. And don't run away with the idea that a *pain in the back* necessarily means kidney disease, as certain advertisements try to make you believe. The pain *may* be kidney trouble, but probably is not. (*See also "Lumbago."*)

The kidneys are subject to inflammations of various kinds. The acute inflammations are serious acute illnesses, and must be treated by the doctor. Nothing is to be gained by a long description of these diseases.

Inflammation of the kidneys (Bright's disease) produces certain signs and symptoms which the reader ought to know something about.

(1) *Smoky urine.*—When the urine looks as if it had been mixed with smoke, it probably contains blood. Take some of it to the doctor at once.

(2) *Dropsy.*—The eyelids are puffy when the patient rises from bed in the morning. The ankles are puffy at bedtime. If the finger is pushed into this puffy swelling it leaves a pit; the flesh seems to be "boggy," and is water-

logged, as the saying is. These signs, seen in a person who has had scarlatina, means kidney trouble. In middle-aged persons who have damaged their kidneys by drunkenness, this dropsy is common.

(3) In kidney disease the heart and pulse beat hard and strong, and the patient is liable to giddiness and vomiting.

Chronic Bright's Disease.—This is of two chief varieties. Persons who have had syphilis, or malaria or gout, and those who work in lead, are especially liable to these forms of kidney decay. But the chiefest cause of all chronic kidney disease is *intemperance*. The early signs of chronic kidney disease are anæmia, loss of appetite, headaches, sickness, general weakness, passing too much urine (especially having to get up in the night to pass it), and dropsy, as before described. The disease generally progresses until the patient gets an attack of paralysis, or several attacks, and then heart disease, and then death. But much may be done by a doctor's careful treatment, warm clothing, and especially by *total abstinence* from alcohol. Alcohol, in fact, is a powerful poison when the kidneys are diseased. Meat must be given up as far as possible, and the diet be confined to milk and farinaceous foods.

The treatment of some of the symptoms of chronic Bright's disease, or chronic nephritis (degeneration or decay of the kidney tissues), is here given:—

For sleeplessness—

(1) Sulphonal, 20 grains, in cachet. (To be swallowed at bedtime, and washed down with a half-pint of hot water.) Or,

(2) Paraldehyde, 1 drachm; water, a wineglassful. (At bedtime.) Or,

(3) Trional, 5 grains in cachet. (To be swallowed an hour before retiring.)

Note.—Chloral, opium and morphine must *not* be taken.

For headache—

(1) Caffeine, 5 grains; antipyrin, 2 grains. (To be taken whenever the headache is violent.)

For smoky urine—

(1) Nitrate of pilocarpine, 4 grains; vaseline, 12 ounces. (To make an ointment, about 3 ounces of which are to be daily rubbed well into the skin and covered with cotton wool, and bandage.)

For dropsy—

General measures—massage, hot-air baths, purgatives.

For vomiting—

(1) Real buttermilk, 1 ounce; potash water, 7 ounces. (To be taken as a draught occasionally.)

(2) Iced champagne.

Koumiss, Home-made.—A stimulating, nourishing, and refreshing food and drink for persons with diabetes, and others with indigestion. *If buttermilk can be got*, mix two pints of it thoroughly with three pints of milk, and add five lumps of white sugar. Put the milk in a bowl, covered with a clean towel, and let it stand in a warm corner for 24 hours. Then pour it into small bottles, cork them, and tie down with corks. Leave the bottles in the kitchen three days lying on their sides and shake them occasionally. After this the koumiss is ready for use.

If buttermilk cannot be got.—Boil enough fresh milk to fill a few quart bottles when cold, not filling the bottles completely, but leaving room to shake. Add to each bottle half-ounce of castor sugar, and 20 grains of Vienna yeast; cork the bottles up with sound corks and tie down. Lay the bottles horizontally on the floor in a warm corner, and shake twice a day. The koumiss will be ready to drink on the sixth day (sooner in hot weather and later in cold.) Can be made thinner by using skimmed milk. —(Yeo.)

Lead Poisoning.—This occurs chiefly among painters, plumbers, compositors, type-founders, and factory-hands in white lead factories and potteries. Those who drink beer to excess are more liable than others.

Poisoning by lead may be known by *attacks of colic, anæmia, gouty attacks, a blue line on the gums, paralysis, and headaches*, and *cramps and numbness*, and, in women, *abortions*. The colic attacks are very severe; the pain is

relieved a little by pressure and a tight belt. The patient is constipated, and often vomits before the colic begins. The anæmia is often the first sign (*see also* "Anæmia"). The "blue line" is not to be seen in persons who brush the teeth regularly. The paralysis is in the form of *wrist drop*—the patient's hands hang down and he cannot raise them.

The poisoning is curable, but will come on again if the patient does not give up his unhealthy occupation. The *colic* yields to opium, but a doctor must be consulted about that. All the signs of poisoning will disappear at last if the patient, *having changed his employment*, will take, for three months, or more, as the case may be, some such medicine as the following:—Iodide of sodium, 40 grains; sulphate of magnesia, one ounce; tincture of *nux vomica*, two drachms; cinnamon water to eight ounces. Take two tablespoonfuls, on rising and at bedtime, for three months.

Lice (VERMIN) are not uncommon on the bodies or among the hairs of persons who are not of cleanly habits. A louse is a tiny insect looking a little like a tiny crab, and, in fact, the word "crab" is often used to refer to such lice. The louse lives on the skin and feeds on the blood of the dirty person who harbors it. The presence of several lice causes itching, and as the person scratches with dirty finger-nails, he infects the little louse wounds with dirt, and thus he gets a sort of skin disease. The whole business is all the more disgusting because it could be entirely avoided by keeping the skin clean. In a bad case, a neglected child's skin or scalp becomes covered with dirty sores and crusted scabs; on the hairs near will be found "nits," tiny eggs, which are glued to the hairs, and cannot be got off by ordinary washing. Later on the glands in the neighborhood become swollen and form painful lumps, which may become abscesses.

Whenever a child's head is always itching, and there are scabs on it, and a few little lumps on the neck, the child probably has *lice*, and we ought to look for the nits, which are gummed to the hairs. First cut the hair short, and burn it. Burn also the cap or hat that he has been wearing, and send his towel and pillow-case to the wash. Then rub into the scalp white precipitate ointment.

Vinegar and water will destroy nits, used as a lotion after washing the head thoroughly. A good lotion for lice

consists of 1 grain perchloride of mercury, 1 drachm spirits of rosemary, and dilute acetic acid up to 1 ounce.

Elderly people of dirty habits often complain of an itching skin, and if the folds of the shirt or chemise near the neck be closely examined, lice may be found. In such a case the *clothes* must be disinfected as well as washed, and that may be done by baking them.

Lighting.—The illumination of a room is a matter greatly affecting the comfort and, indirectly, the health of the occupants, and is of especial importance to eyesight in the case of factories, workshops and schools, where the eyes are concentrated on small objects for many hours at a time.

The difference between good lighting and darkness is the difference between cheerfulness and gloom. It vastly increases the efficiency of the worker; it obviates eyestrain and the development of myopia. Good natural lighting aids cleanliness, destroys germs and their dangerous products and influences directly the health of the body. Just how light acts in this way is not definitely known but it is a well-proven fact. Some direct evidence comes from the recognized effect of ultra-violet rays and the Finsen light on certain disease processes on the surface of the body.

The best illuminant is sunlight. The best artificial illuminants are those which most closely resemble sunlight. All sources of light should be shaded and the best form of illumination is that known as the "indirect" where light is reflected from a broad light surface.

An important aid to the illumination of dark interiors by natural light has been the recent introduction of panes or plates of glass with a series of ridges or prisms, which refract and diffuse throughout a room light which would otherwise illuminate it but partially or not at all.

ARTIFICIAL LIGHTING,—of all the systems of artificial lighting in common use at the present time the incandescent electric light should be placed in the first rank, followed next by the incandescent gas-light (Welsbach).

The Incandescent electric light presents the following advantages over coal gas, oil and candles. There is no consumption of oxygen, there are no products of combustion to pollute the air, and the heat produced is relatively slight. The light of the arc light is not yellow, but

white. It precisely resembles solar light in being rich in the violet and the ultra-violet rays. Plants grow and flower, and fruit ripens, when exposed to this light, just as they do in the sunlight; whilst photographs can be taken as easily by the arc electric light as by daylight.

The arc light, while well adapted for lighting streets, large halls and buildings, is extremely dazzling, and is productive of injurious effects on the eyes of those who are much exposed to its influence unless it is extremely well shaded.

The incandescent lamps are best suited for domestic use. The light is steady and agreeable, but should always be shaded or used as a diffused indirect light.

Modern economical forms of electric lighting for work rooms and halls are the mercury vapor tubes used in the Cooper-Hewitt and the Moore systems. In the Cooper-Hewitt light the red rays are absent and human beings have the complexion of death. The light is a very good one to work by, however. The Moore light has a more agreeable yellow or pink rose color.

The *Welsbach* light is less productive of carbon dioxide than the average oil lamp and consumes not quite one-half less gas than the ordinary gas burners, giving rise, therefore, to the evolution of half the heat and half the amount of carbon dioxide, while its illuminating power expressed in candles is more than three times as great as the best ordinary gas burners or incandescent electric light.

The important attributes of an illuminant, from the health standpoint, are the following:—amount of oxygen removed from the air, the amount of carbon dioxide produced, the amount of heat produced and the degree of vitiation of the atmosphere.

The following table shows these points for the commoner forms of illuminations:—

| | Candle power | Oxygen removed cu. ft. | Carbon dioxide produced cu. ft. | Heat calories produced | Vitiation equal to adults |
|--|-----------------|----------------------------------|--|------------------------------|---------------------------------|
| Tallow candle | 16 | 10.7 | 7.3 | 1400 | 12 |
| Kerosene oil lamp . | 16 | 5.9 | 4.1 | 1030 | 7 |
| Coal-gas burner .. | 16 | 6.5 | 2.8 | 1194 | 5 |
| Welsbach burner .. | 50 | 4.1 | 1.8 | 763 | 3 |
| Electric incandes- cent light | 16 | 0.0 | 0.0 | 37 | 0.0 |

Acetylene gas, generated by the action of carbide on water, furnishes a powerful white light; but its use is not unattended with danger, unless great care is exercised.

Coal gas gives a yellow or orange flame which is usually steady and agreeable although there are certain drawbacks connected with its use. It consumes much oxygen, produces carbon dioxide, produces much heat and vitiates the atmosphere considerably. Leaky gas pipes are dangerous. The products of combustion are injurious to health. The combustion dries the air and the humidity is much lowered.

Each cubic foot of gas burnt per hour from ordinary burners vitiates as much air as would be rendered impure by the respiration of an individual.

Kerosene oil lamps are well fitted for use in rural communities. The fuel is cheap and the light a steady one, and agreeable if properly shaded. They vitiate the air greatly and produce a great deal of heat, as well as consume much oxygen and produce much carbon dioxide. Their use is sometimes attended with danger from explosion and fire, but modern lamps are made in which explosions are impossible, and there are lamps which become extinguished automatically when they are upset.

Tallow candles are the poorest of the common forms of illuminants. The light is flickering, weak, too yellow and sooty. Much gas and heat are produced, the vitiation of the air is great, much oxygen is consumed and the amount of carbon dioxide produced is large.

Liver, Diseases of the.—The liver, which is a very large gland, lying chiefly on the right side, below the lung, and beneath the lower ribs, has for its principal duty the formation of a digestive fluid called *bile* or *gall*, which is stored up in the gall-bladder on the under surface of the liver, and is poured out drop by drop into the gut or bowel so that it may mix with the food and digest it. To *digest* food means to prepare it for absorption into the blood. The liver has other work to do also, but the making of the all-important *bile* is its chief industry. Now *bile* not only helps in the digestion of the food, but it is a natural disinfectant, and a natural purgative, helping the lowest parts of the bowel to get rid of the waste matters. It is now easy to see why a stoppage in the formation of bile leads to costive bowels, and to indigestion.

Like every other part of the body, the liver is subject

to congestion and inflammation. *Acute inflammation* of the liver is caused by excess of alcoholic drinking, indiscretions in diet, etc., and requires rest in bed. The patient is a little feverish, the liver is tender, the whites of the eyes are yellowish, the motions are pale colored, the urine high-colored, and he has a headache and languid feeling. A light milk diet will be needed, and a three-grain dose of calomel; and a hot linseed and mustard poultice must be put on over the liver and replaced when cold by a thick layer of cotton-wool. The attack generally lasts about a week.

Chronic inflammation of the liver results from heart-disease of certain kinds, and this is the patient's sad misfortune; the chronic enlargement of the liver due to alcoholic excess is more common and is the patient's fault. Its cure depends very largely on the patient himself. The chronic enlargement is called *cirrhosis* (pronounced sirrosis) of the liver. The symptoms of it are also those of chronic indigestion caused by alcohol, because it is always accompanied by inflammation of the stomach. The chief signs are trembling and coated tongue, shakiness of the hands, enlarged veins over nose and cheeks, sickness on rising in the morning, loss of appetite, a dry taste in the mouth, sleeplessness. Later on, piles and blood-vomiting (which *see*); watery eyes, muddy complexion, fat body, thin legs and arms.

Most of these drunkards, suffering thus from years of folly and self-indulgence, are weakened from long abstinence from food, and a slight nutritious slop diet is one of the first necessities. But Nature will recover herself largely without much treatment *if only the alcohol is given up absolutely and at once*. Change of occupation is of vital importance for waiters, publicans, and barmaids who have developed the disease. Outdoor labor should be tried.

Cirrhosis of the Liver has very, very numerous, painful and distressing symptoms. We cannot here attempt a thorough exposition of the treatment necessary. When the disease is definitely developed the patient will require continuous medical aid as well as his own efforts at keeping sober. The following medicine will help him to resist the craving for drink and will do his indigestion good:—Taraxacum juice, 2 ounces; dilute nitro-hydrochloric acid,

$\frac{1}{2}$ ounce; tincture of nux vomica, 6 drachms; liquid extract of Cinchona bark, 4 drachms; water to 12 ounces. Take a tablespoonful in a wineglassful of water before meals.

Cancer of the Liver.—This generally occurs in the intemperate, but a secondary growth in the liver may happen to anybody with a cancer. (See "Cancer.")

Liver Colic.—This is the pain caused by the passage of a *gallstone* which is forced from the gall-bladder where it was formed, through a narrow tube too small for it, into the gut. The pain is sudden and intense and is felt in the lower part of the chest, the right shoulder and back. It is often so severe that the wretched man (or more often woman) is bent double in agony and writhes about on the floor, shivering, sweating and miserable. After a time the pain becomes less, and dull and aching until it all subsides—or a fresh attack occurs.

Very often the patient gets yellow all over, jaundiced. The whites of the eyes are the first to show the yellowness and the last to lose it. If the gallstone passes into the gut, the pain all goes away, the jaundice gets better and the little stone is passed away in the motions. But the stone may remain in the little tube, unable to get out.

The actual attack of pain must be treated by a medical man. Afterwards the patient must take precautions against the formation of another stone. The diet must be spare, plenty of exercise must be taken and alkaline drinks must be taken in large quantities always. Also the patient must take a heaped-up teaspoonful of phosphate of soda in hot water every morning.

Hot baths or hot poultices are useful for the attacks of pain, until medical advice can be obtained.

Lockjaw. (See "Tetanus.")

Locomotor Ataxy.—A nervous disease, chronic, progressive, ending in death in a few years. Most common in middle-aged men, especially fast men, who have had *syphilis*, and who, in addition, are given to drinking alcohol in excess.

There are three stages to the disease:—

(1) *The Pre-ataxic stage.* (Ataxy means inability to control muscular movements.)—Some of the signs and symptoms in this stage are:—"lightning-pains" (acute, severe and violent sudden pains lasting a few seconds);

“girdle-pain,” a sensation as if bound tight with a belt or iron band.

(2) *Ataxic stage*.—The first sign is often the tumbling forward into the basin on closing the eyes during washing in the morning, another is the difficulty in buttoning up the collar.

The patient soon feels as if he were walking on wool instead of on the pavement, and cannot turn round suddenly, or stand with his eyes shut. He has to look at his feet when he walks. He is *no weaker*, however. Then he may have vomiting, acidity, shortness of breath, inability to pass his urine or to hold it sometimes. The skin is dry; the nails crack, perhaps. The pupils of the eyes are small.

(3) *Paralytic stage*.—The patient becomes bed-ridden, and sooner or later dies of pneumonia or some other serious disease. The disease is probably always incurable, but some cases caused by syphilis have recovered under treatment.

Lumbago.—Rheumatic pains in the muscles of the loins—backache. This often comes on quite suddenly as a violent pain in the back, like a stab with a dagger in the loin muscles. It comes on again every time the sufferer rises from lying down to the erect position, and also sometimes when he coughs or sneezes or laughs.

He is apt to imagine that he has some terrible kidney disease but he probably has not. There are no signs of illness, except the pain; and it is not like the pain of either kidney or liver colic.

When it is better, the back feels stiff and sore for a long time.

Treatment.—As in the treatment of all other pains, we must try to relieve lumbago not only by local applications, but must get at the root of the mischief by giving medicine internally.

Local applications—

(1) Hot fomentations, sprinkled with laudanum or turpentine.

(2) Put a piece of brown paper over the loins and then iron them with a heated flat-iron.

(3) Hot-air baths.

(4) “Baths” of warm medicated *mud*, such as “fango,” are very useful and comforting.

(5) Rub in compound camphor liniment four times a day, and let the patient wear a warm, wide, woolen belt next his skin, around the loins and abdomen.

(6) *Dry-cupping* of the loins is very likely to give relief to lumbago in robust and full-blooded persons. This is a treatment which ought to be done by a doctor or nurse, but as there are always a few people who like to do things on their own responsibility, we describe the process here. To dry-cup, take a thick glass tumbler, and put into it a bit of blotting-paper sprinkled with methylated spirit. Set fire to the paper, and just before it has quite burnt out, clap the mouth of the glass on to the loins of the patient. The heating of the air in the glass has "rarified" it, and a vacuum is produced so that the skin is sucked up into the glass and the blood rushes to it, thus being drawn from the seat of the pain. The glass is left on for 15 minutes. This can be repeated in several places. *Wet-cupping* is even more effectual, but it cannot be done by non-medical persons.

(7) If the patient with lumbago wants to move about, he should wear a plaster made from equal parts of belladonna plaster and opium plaster and spread on leather.

(8) Many doctors get good results from *puncture*. They rapidly insert a stout needle into the loins and pull it out again, and repeat this in several places. It is a somewhat painful proceeding at the time, but gives relief directly afterwards.

(9) It may be necessary, if none of these methods give relief, for the doctor to inject some medicine into the loin with a syringe, through a fine, hollow needle.

(10) Very chronic cases of lumbago are relieved by blistering freely.

(11) Electricity is used in some hospitals to relieve pain. *Internal remedies* are such as these:—

Aspirin, sodium salicylate or salicylate of colchicum.

Lungs, Diseases of the.—The lungs are two elastic organs, occupying the chest and sharing it with the heart, which lies in a closed membranous bag between them. The chief duties of the lungs are:—to enable the blood which circulates in the spongelike tissue, to come into contact with the oxygen of the air; and to give off carbonic acid gas in

the breath. The oxygen is required to purify the blood which gets filled with carbonic acid gas in doing its work of nourishing the tissues of the body. It will be seen that the lungs are most important organs. Thus:—

(1) If they are undeveloped, then the blood does not get aërated and purified as well as it should; also it does not give up its carbonic acid gas properly. So the whole nourishment of the body suffers and the body remains stunted.

(2) If they are inflamed or diseased, then the blood which is continually circulating through them carries impure and used-up blood to the rest of the body, instead of pure fresh blood. We shall refer again to this condition.

(3) If the lungs are too much developed—blown-out, as in many athletes, and asthmatics and bronchitic persons, and glass-blowers, and wind-instrument players, then they cannot expand and contract properly, and the blood never gets properly aërated. The results are shortness of breath, blueness or coldness of the hands and feet, and so on. (See “Chest Deformities.”)

(4) In people who suffer from Bright’s disease, and heart disease, the lungs are apt to get dropsical or “water-logged,” and hence the blood cannot be properly aërated.

The disease which is most important of all those which affect the lungs themselves is one known as “Pneumonia.” This is also called “inflammation of the lungs,” but as it is in reality a disease of the whole body, involving the whole of the respiratory organs and the digestive and other organs as well (though the chief mischief is in the lungs), we shall devote a separate article to it. (See “Pneumonia.”)

The next most important lung disease is *Broncho-Pneumonia*, in which there is Bronchitis as well as Pneumonia. It is commonest in children under five years of age, and is very often fatal. Other lung diseases are *Abscess of the Lung*, *Gangrene of the Lung*, and *Tuberculous Disease of the Lung*, which is another name for our old enemy, Consumption. Lastly, the lung may be affected with Cancer.

Madness, Symptoms of.—The mental symptoms and signs of unsoundness of mind are mainly three. Every insane person has one or more of these symptoms, though it is quite possible for anybody to have one or more of them in a very slight degree, without being considered or treated as insane. A very large number of persons are subject

to delusions; and as long as they are harmless delusions, and as long as the patients know that they are probably delusions, and do not act upon them, there is no need to put them under care and restraint in an asylum or home. These are the symptoms:—

An *hallucination* is a disorder of one of the special senses (seeing, hearing, smelling, tasting or feeling). That is to say, the patient fancies that he hears voices, when there are really no voices; or that he has a bad taste in his mouth, when there is nothing in his mouth and it is quite healthy and clean; or that he sees persons, who are not there; or that he smell onions, when there are no onions near. Certain very saintly people in the middle ages, particularly half-fed and badly-treated nuns and monks, used to fancy that they heard voices—whether from heaven or hell—telling them to do certain actions. So long as they kept common sense enough not to act upon the fancied voices, they were sane; but as soon as they began to act upon the suggestions (which, after all, came from their own brains) then they were really insane. Unfortunately, no one in those times had any really scientific knowledge about insanity; and the result was that if these poor, half-starved creatures acted piously as the result of the “heavenly” voices which they thought they heard, all went well with them, and after death they were regarded as saints. But if the voices made them act wrongly and commit crimes instead, they were said to be “possessed of the devil,” and treated accordingly. Many a poor wretch, even at the present day, commits crimes at the instigation of “voices” which do not exist except in his own ears, and come from his poor diseased brain. No one who confesses that he hears “voices” talking to him, or about him, and saying rude or slanderous things about him, is quite fit to be trusted; at any time he or she may become quite insane and irresponsible. The golden rule in all such cases is that of securing medical advice as early in the development of the ailment as may be possible. This practice, in fact, constitutes the only hope of cure.

An *illusion* is a false perception of the senses—that is to say, the senses misinterpret what is seen or heard. A person who has illusions, for example, sees an empty dressing-gown hanging behind the door and *believes* it to be a burglar concealing himself. Some persons have illusions

too, but they do not act upon them, or at any rate, act sensibly. A man who, seeing his beloved wife in the night standing in the bedroom, believes her to be the devil, and beats the life out with a poker is acting insanely, and is certainly, if only temporarily, insane. We are all very often obliged to doubt the evidence of our senses; especially in watching conjuring and sleight-of-hand tricks. But no sane man would knock a conjurer down because he pounded up his gold watch before his eyes; the man would know quite well that he was under an illusion and would applaud the cleverness of the conjurer.

The third mental sign of insanity is delusion. A *delusion* is a disorder of consciousness. It is a false belief in some fact (which nearly always concerns the patient personally) *of the falsity of which he cannot be persuaded, either by his own senses, knowledge or experience, or even by the declarations of others whom he trusts.* A man, for instance, may believe that his legs are made of glass, and that he cannot sit down without a risk of breaking them. If he is insane, it is perfectly hopeless to prove to him that his legs are flesh and blood and that they bleed when pricked; it is a waste of time to argue with him. He is insane, and he not only believes that his legs are of glass, but he is terrified lest they should be broken. Of course, he is not always quite consistent in his actions, but then none of us are quite consistent, even when we are sane. There are plenty of well-educated people who are under delusions on certain subjects, such as table-turning, etc. These are "sane delusions," or, more properly, erroneous judgments. A perfectly logical and consistent sane man would argue, if invisible spirits could be got to rap on tables, and make them turn round in the dark, that they might fairly be expected to do something useful and serviceable also, such as dusting the furniture or cooking the dinner! But no one with the "table-rapping" delusion ever seems to expect a spirit to use his energy in a reasonable and useful way!

Malaria.—This is the general term for diseases that have been known for years as marsh-fever, coast-fever, ague, jungle-fever. The whole subject of the study of malarial diseases forms one of the most triumphant and interesting of all those connected with the science of medicine.

Malaria consists of a series of periodical attacks of *fever*

which come on regularly and almost exactly just when they are expected. There are several types. Thus you may get daily malarial fevers (quotidian), or an attack every other day (tertian), or an attack every third day (quartan).

Cause.—The cause is the presence in the blood of one of three parasites, all very much alike and microscopically tiny. The parasite is injected into the blood by mosquitoes which have first chanced to bite someone else ill with malaria, and have themselves become infected. It is believed that it is impossible to catch malaria without being stung by a certain kind of mosquito, called the *anopheles*. The parasites of malaria, thus injected into the body by an infected mosquito, multiply rapidly in the blood, and it is the poison generated by their presence which causes the feverish attacks.

Before an attack of malarial fever, or “ague fit” comes on, the patient gets headaches and shiverings, but he may be quite well.

The *ague fit* itself consists of about an hour of shivering (when the patient gets to bed and piles clothes on himself, even in the hottest weather); then several hours of intense heat and high fever (when he throws off the clothes and vomits and has violent headache), and then a period of sweating, which continues till he has gradually recovered and feels quite well. The whole attack happens again next day, *or* in two days, *or* in three days, and again and again, unless he is properly treated.

Occasionally persons die in these attacks.

Now, even if the fever is neglected (and it often is), sooner or later, if the person leaves the malarious country and gets no more mosquito bites, the disease wears itself out and gives no more trouble. But if it is more severe, malaria becomes a chronic disease and leads to a chronic state of ill-health, consisting of *anæmia*, *yellow wasted skin*, *enlarged liver and enlarged spleen*. This is called by doctors the “malarial cachexia.”

The cure of malaria is accomplished by the use of quinine, but every case needs special care; and the same form or preparation of quinine does not suit everybody. Moreover, no two people thrive on exactly the same dosage. Overdoses of quinine upset the digestion and cause giddiness and ringing in the ears.

As a rule five grains of quinine taken three times a day,

in capsule or pill form, is sufficient to cure an acute attack of malaria in an adult. The dosage must be continued for several weeks, however, or the malarial attack may return.

Prevention of Malaria.—(See also “Mosquitoes.”)—As the only method by which malaria can be contracted is through the bite of a mosquito infected with malaria the most rational way to prevent it is by destroying all mosquitoes in the neighborhood of one’s residence. Details of the methods for the destruction of mosquitoes are given under the heading “Mosquitoes.”

As mosquitoes can only obtain the malarial parasite from a person suffering from malaria it stands to reason that the best way is to keep mosquitoes away from the malarial case by careful screening.

When living in a malarial country in which the development of mosquitoes cannot be controlled, some protection may be secured by taking quinine from time to time in doses of ten or fifteen grains a day.

Malignant.—This word is used by doctors to refer to any form of disease which is more serious than the usual type and almost certain to be fatal. Thus, we speak of malignant smallpox, malignant typhoid, etc. The word is applied also to the set of tumors called cancers, which include every form of tumor which, if left alone, will ulcerate and kill the patient by exhaustion, and which, even if removed, will probably come back again, growing in another part of the body.

Massage.—This is the general term for the work done by nurses who are skilled and certificated *masseurs*, or *masseuses* (for both men and women do this work). Their English name is “rubbers.” Massage, or scientific medical rubbing, can be learned from a book, by those who know physiology; but no masseur is of any use until he understands the *meaning* of the rubbing which he learns to do. The movements included in Massage are called *stable* and *labile*. The *stable* movements are pressing, pinching, hacking, thrusting and tapping the skin and muscles, to improve the circulation and stimulate the tissues. The *labile* movements are stroking, rubbing and kneading. Massage is useful in the following complaints:—stiff joints (unless they are “strumous” or “tuberculous,” when they must not be rubbed), inflammatory tough thickening,

rheumatic stiff joints, and fractures, or broken bones, and a few cases of slight paralysis and sprains.

Measles.—A majority of us suffer from measles in childhood. But let it be remarked here that the ideas held by many of the ignorant poor, that every child *must have* measles, and that a child therefore might as well be put in the same bed with a brother or sister who has the disease, are absolutely wrong, if, indeed, not *criminal*. Dr. Alexander Gordon quotes the following experience:—"A boy of 14 had measles, and his mother, feeling sure that the other children would catch the disease in any case, took no precautions. Her six-months old baby died after two days of measles, and her little girl of two years lost the sight of both eyes. So much for the wickedness of the superstition."

The disease is contagious, and infects the air round the patient and the clothes which he wears, though to a less degree than scarlet fever does. It is even more contagious before the rash comes out than afterwards. Between the day of catching the disease and the first signs of it, about ten days elapse. It begins with feverishness, loss of appetite, drowsiness, and chills, and in some children with vomiting or fits. Then the eyes get red and watery, the nose runs, and there is a cough because the air-tubes in the lungs are also affected. On the fourth day of this "bad cold" the *rash* comes out. (See "Rashes on the Skin.") There are pink spots, round, and afterwards irregular in shape, patches of redness with scalloped edges. Only a doctor can distinguish between it and the rash of scarlet fever. The rash is mostly on the face which gets red and blotchy, but there are some patches on the body and limbs, too. In three days it has reached its height and then it begins to fade, leaving mottled, brownish patches from which the skin is shed in tiny bran-like fragments. This "peeling" is often hardly noticeable. The feverishness is worse when the rash breaks out, and then begins to subside. After about a week the patient begins to get well again.

This is an ordinary mild case of measles without complications. But there are many possible complications. Thus, the catarrh of the air-tubes may become a real severe *bronchitis*, or the lung itself may share the inflammation which then develops into a *pneumonia*. Then the voice-

box or *larynx* may become inflamed too, and *laryngitis* comes on, with a croupy cough and hoarseness. Other complications are, inflammation of the eyes (*ophthalmia*), of the mouth, of the bowels (causing diarrhea), and of the ears. Enlarged tonsils, swollen glands and tuberculosis and pleurisy are all apt to occur.

Treatment.—When a child is “sickening” in the way above described, the disease may turn out to be measles, or German measles, or scarlet fever. It is wise to have the child under medical supervision from the first—in order to name the disease correctly, to treat it correctly, and to guard against complications.

No one can possibly cut short or “cure” the disease all at once. But a good doctor can point out how best to guide and support the patient until the course of the disease is run, and how so avoid the terrible possible complications. Briefly, this is what to do—(1) Isolate the child if possible in a room with not a single piece of unnecessary furniture. (2) Let the temperature of the sick-room be not less than 60° and not more than 70°. (3) Moisten the air by boiling a kettle in the room and have plenty of steam. It helps the patient to breathe. (4) Have two beds in the room, one for day and one for night. Ventilate it well with open window or door, using screens round the bed itself. Plenty of fresh air, but no draughts. (5) Have a subdued light in the room. (6) Disinfect freely. Use a good disinfectant, and be sure to put some of it into the bed-pan before and after use, and to rinse all vessels in it which have been used by the patient. (7) Milk diet is necessary, milk alone, or with lime water or soda water. Barley-water and lemon juice or home-made lemonade may be freely given. (8) If the fever is high the doctor may direct you to sponge the body with tepid water. The cough in ordinary cases needs no special medicine. (9) To ease the feverishness at first, you may give a teaspoonful of this mixture to any child with measles from 2 to 5 years of age:—Solution of acetate of ammonia, 2 ounces; spirit of nitrous ether, 2 drachms; sirup, 1 ounce; distilled water to 4 ounces: mix. Dose—One teaspoonful every two or three hours. (10) After a week, in ordinary cases the child may get up from bed but not leave the room. *In the poorer classes children are generally allowed out too soon; hundreds of cases of consumption and deafness and chest*

troubles are due to this serious mistake. In the winter no child ought to be allowed to run about in the open-air for at least a month after the attack. "Serious complications are more common after measles than after any other disease," wrote Dr. Whitla. (11) During convalescence tonics will be wanted, such as quinine and iron, to improve the appetite. Whooping cough is very common after measles. No case of either of these diseases should be treated without medical advice.

Medicine Chest.—Here follow a few suggestions for the home medicine-chest. Bottles ought to be labeled with large white labels, well written, and perfectly clear. Poisons must have red as well as white labels, and they ought to be in green or blue *fluted* bottles, so that they can be picked out when the light is bad. On every bottle there ought to be written the dose of the medicine, and, in case of poisons, their uses.

A well-stocked home medicine chest should contain:—

- A pair of scales and drachm and grain weights.
- A clinical thermometer (*see* notes below).
- A glass measure, marked in drachms and ounces.
- A minim measure, for small doses.
- A medicine glass, marked in teaspoonfuls and tablespoonfuls.
- A feeding-cup.
- A glass eye-bath.
- Brushes for painting out the throat (no two persons to use the same brush).
- A piece of oiled silk, say a square yard, or a piece of jaconet.
- A roll of surgeon's lint.
- A bottle of pastils (or tabloids or soloids) of corrosive sublimate, for making lotions, for washing ulcers, etc.
- A cake of carbolic soap, 10 per cent.
- A waterproof sheet, for confinements, etc.
- A roll of adhesive plaster.
- A glass ear-syringe: A Higginson syringe.
- A bottle of household ammonia, for bites of insects, stings, etc.
- Bandages, assorted. A "wringer" (*see* "Fomentations," pp. 86-7).

For external application, in bottles marked POISON:—

Liniment of iodine, two ounces (*see* notes below).

Glycerin of the subacetate of lead, four ounces.

Creosote, pure, two drachms.

Zinc sulphate, four ounces (*see* notes).

Carbolic acid lotion, 1 in 60, two pints.

Friar's balsam, four ounces.

A bottle of smelling salts.

Boric acid powder, one ounce.

Zinc ointment (one ounce).

Sulphur ointment (for the itch).

Hamamelis ointment (for piles).

For internal use—(1) as purgatives:—

Sirup of senna, two ounces. (Dose for children, one drachm.)

Epsom salts, half-a-pound. (Dose 30 grains to half-ounce.)

Compound rhubarb pills, four grains in each.

Calomel, a bottle of tablets of a grain each.

Castor oil, four ounces. (Dose, about one ounce.)

(2) To relieve pain:—

Laudanum, half a fluid ounce. (Dose, up to 30 minims.)

Paregoric, two ounces. (Dose half to one drachm [adult].)

Phenacetin and caffeine tablets, 25.

(3) To stop bleeding:—

Alum powder, two ounces (*see* also notes below).

(4) To stop diarrhea:—

Aromatic chalk powder. (Dose 10 grains to one drachm.)

Salol (five grain tablets), 25.

Gray powder (for children), an ounce. (Dose, $\frac{1}{2}$ grain.)

(5) For coughs, etc.:—

Ipecacuanha wine, two ounces. (Dose, 10 to 30 minims.)

Sal volatile, two ounces. (Dose, one drachm in water.)

Pil. Ipecac. et Scillæ.

(6) For feverish colds:—

Quinine tablets of two grains each, 25.

Dover's powder tablets, five grains in each, 25.

Smelling salts.

NOTES ON THE FOREGOING MEDICINES, ETC.:—

A *clinical thermometer* is marked from 95° to 107° Fahrenheit. It is used by placing the mercury bulb under the tongue, closing the mouth, and leaving the thermometer there for three minutes or less, according to the make of the thermometer. A person in health varies from 96° to 98.4°. Above 99° he is said to be *feverish*, and below 96° he is said to be *subnormal*, and may be in "collapse." Some people prefer to "take the temperature" in the armpit, which must be wiped dry before the bulb of the thermometer is put there, and it must be left there about 15 minutes. After use, the mercury column is to be taken down again by jerking.

The *throat-brush* must, of course, be used for nothing else, and thoroughly washed every time. Each brush should have a label gummed onto it, bearing the name of the person who has used it. The brush must be dipped into the glycerin of tannic acid (used for painting the throat) in a saucer and not in the bottle.

Corrosive sublimate lotions.—One part in 2,000 of water is a strong enough antiseptic lotion for most purposes.

Carbolic soap.—The hands ought to be washed with this before any cuts, ulcers, or burns are attended to.

Bandages.—A three-inch unbleached calico bandage can be cut into two in its new rolled-up condition, by a sharp knife, if finger bandages are wanted.

Liniment of iodine is good for painting on chilblains, and for painting on the skin of the whole of the chest, back and front, in cases of irritable and frequent cough.

Subacetate of Lead with glycerin is useful in eczemas, especially if mixed with four parts of fresh milk and applied on lint. Goulard water is the name given to the diluted solution of subacetate of lead, and it is used as a lotion for sprains and bruises. Mixed with one-eighth of its volume of *laudanum*, it becomes "lead and opium lotion," and is useful for painful bruises and itchiness of the skin.

Creosote is useful in toothache. One drop on a tiny piece of cotton-wool, put into a hollow aching tooth will relieve the pain. Oil of cloves would do as well. Two to five drops swallowed in a bread pill will often stop seasickness.

Zinc sulphate.—Externally, this is very useful. Red lotion, used for ulcers (see “Ulcers”) is made of zinc sulphate, 20 grains; compound tincture of lavender, 150 minims; and water to half-a-pint. As an eye lotion for inflamed eyes, use 30 grains to 10 ounces of pure water. But zinc sulphate is an internal medicine also. Taken internally in doses of from one to three grains (for an adult) it is a good *tonic*, and in doses of from 10 to 30 grains it acts as an *emetic* and produces vomiting. It is useful to have this drug, therefore, always in the house.

Friar's balsam (compound tincture of benzoin).—This is one of the most useful things in the chest. Externally it is an excellent antiseptic soothing and healing application for all cuts and wounds. A cut finger may be wrapped round with a bit of clean lint dipped in balsam, and covered with a piece of jaconet, and the dressing need not be removed until the cut is healed. Of course, before applying the balsam you must hold the cut under the tap for a time to get the wound quite clean.

Internally, a good cough mixture may be made for a hard, painful cough by putting an ounce of balsam into an eight-ounce bottle and filling up with water. Dose, a tablespoonful three or four times a day. Again, a teaspoonful of the balsam in a jug of boiling water gives off a healing vapor very useful in hoarseness and sore throat.

Boric acid powder, a clean, non-irritating antiseptic dusting powder for all sorts of purposes.

Compound rhubarb pills are to be taken, say, one every evening, by persons with costive bowels and furred tongue.

Calomel is a splendid liver stimulant. Bilious people, who suffer from specks before the eyes and headaches, should take a dose of calomel in the evening, occasionally, and follow it up by a dose of Epsom salts next morning. Calomel powder should be dusted on those ulcers on the lower third of the leg occasionally, and on those mucous red patches on the face, and on the privates of persons with syphilis.

Castor oil.—Besides being a purgative it is useful for the eyes. One drop of castor oil when you have “grit in the

eye" gives almost instant relief. Every case of summer diarrhea ought to be given a dose of castor oil first, to clear the bowels out.

Laudanum is tincture of opium and poisonous. It is useful in all cases of mysterious colic or pain of any kind if the doctor cannot be had. It is useful as a local application, too, especially for toothache, or to increase the action of poultices.

Paregoric is compound tincture of camphor. It is useful for children's coughs and restlessness and sleeplessness, especially when combined with ipecacuanha wine.

Phenacetin with caffeine is very useful for migraine or sick headache due to fatigue or too much reading; also for feverish attacks.

Alum is an astringent, and useful for gargles in cases of relaxed sore throat, especially if combined with an equal quantity of chlorate of potash. A teaspoonful of each to half-a-pint of water will make a strong gargle.

Alum will also stop bleeding from razor cuts. All barbers keep blocks of it on their shelves. A teaspoonful of alum in a very little water will often act as an emetic. With four grains to the ounce of water may be made an eye lotion for bloodshot eyes. A lotion of twice that strength, as a vaginal douche, is useful for women who suffer from "whites."

Salol will not stop diarrhea of itself; but it disinfects the bowels and thus removes the irritating matters which are causing the diarrhea.

Ipecacuanha wine is an emetic in doses of four to six drachms, but in doses of 10 to 30 drops (adult) it is a splendid expectorant, and makes a cough easier.

Quinine as well as phenacetin is "good for" feverishness, but it is no use trying to knock down fever until the bowels are acting freely.

Dover's powder (compound ipecacuanha powder, containing also opium). It increases the action of the skin, causing a healthy free perspiration in acute catarrhs; and it checks diarrhea. For children it is almost the only safe preparation of opium; the dose is one grain for every year of the child's life.

Gray powder.—This is mercury with chalk. It is of the utmost use for children with diarrhea in doses of half-a-grain, twice a day, especially for those puny, miserable

children who are of unhealthy parents and badly fed, and are always having diarrhea with foul fetid motions.

Meningitis.—This disease may be of tubercular origin, occurring as a primary disease in children or in adults secondary to tubercular infection elsewhere in the body.

Epidemic Cerebro-spinal Meningitis is an acute germ disease caused by the meningococcus, occurring most frequently in the young, but not confined to any age. The disease usually begins abruptly with a chill followed by vomiting, excruciating pain in the head, back and limbs. The head is bent back.

There is high fever and sensitiveness to light, sound and touch.

Untreated or improperly treated, this disease usually results in death; or if recovery takes place is very liable to be followed by blindness, deafness, paralysis or imbecility.

A physician should be called at the earliest possible moment, for if antimeningococcus serum can be administered early enough complete recovery takes place in the great majority of cases.

Prevention.—All cases should be promptly isolated. As most cases occur in the presence of unhygienic conditions, care should be taken to improve the sanitary conditions where danger of infection threatens.

As infection is probably contracted through the mucous membranes of the nose and mouth the hygiene of these cavities should be carefully seen to by the use several times a day of a mild antiseptic solution such as the official *Liquor Antisepticus Alkalinus*.

For this purpose a nasal douche, such as may be had at any drug store, is of service.

Menstruation.—This is a natural function in every female. The discharge, which occurs about every twenty-eight days and lasts from three to eight days, is accompanied, in many women, by feelings of tiredness, headache and irritability; and in some cases by severe pain and sickness. In a few women the whole phenomenon is painless and gives no trouble at all. This function of menstruation begins, in temperate climates, between the ages of 14 and 16, and as soon as it has become established the girl is said to have reached the "age of puberty."

During pregnancy the process does not occur, and in fact the sudden cessation of the flow is often the first sign

that a woman is about to bear a child. While suckling her baby, the flow is still suspended, and, among the poor, women often continue to suckle a child far beyond the proper length of time (about six months) because they *wrongly* suppose that a new pregnancy is impossible as long as suckling is continued.

Disorders of Menstruation.—(1) It occasionally happens that menstruation ceases in a woman who is neither married nor about to be a mother. This should not, in itself, cause alarm. The reason is probably that she is anæmic, or poor-blooded, and that Nature is trying to set matters right in her own way. At the same time, the doctor ought to be consulted.

(2) In some women menstruation is accompanied by much pain, headache, backache and languid feelings. This may be due to neuralgia, inflammation, or some other cause. For a woman who has never borne children or suffered from any internal complaint requiring a medical examination, the following medicine will be found useful:—antipyrin, 30 grains; tincture of castoreum, 90 minims; liquor morphinæ, 20 minims; spirit of chloroform, 40 minims; water to 6 ounces. A fourth part to be taken every two hours while the pain continues, but not more than four doses are to be taken altogether, except by express medical advice, because this medicine contains poison. Very often these cases are benefited by surgical treatment in a hospital.

(3) In the few cases in which very large quantities of blood are lost at each period, no home treatment ought to be attempted, but medical advice obtained before severe anæmia sets in. (*See also "Change of Life."*)

Middle-aged Man, The.—"After the age of 50, the less a man eats and drinks, the more healthy he is likely to be." Let us see how and why this statement is true. In the first place we all, or nearly all, eat a good deal more than we need. We could almost certainly do all the work required of us on a very much smaller consumption of food, and we could generally do it better without stimulants, such as spirits. Now, of course, all food contains only a certain amount of nourishment; the remainder of it is waste matter, and has to be got rid of somehow, by kidneys, and bowels, and skin, and breath. These are facts of very elementary physiology, such as every child ought to be

taught at school; but, unfortunately, the majority are still ignorant of them, and thoughtless about them.

While one is still young, the body will answer to almost any strain that is put upon it, for a time; and that is how it is that excesses and unsuitable foods do not hurt as much as might be expected. If one eats too much meat, or drinks too much of that very unnecessary alcohol, the youthful body strains a few points and gets over the trouble by drawing on the reserve powers. In middle-age there is less reserve power, and, especially in those who have been careless or dissipated in youth, the body finds it difficult or impossible to get rid of the waste matters in the food.

Again, in middle-age we are too ready to take less exercise, to ride instead of walk, and, *worst of all, to find our chief pleasure in eating and drinking*. We are apt to get stout, and, as we grow more and more self-indulgent, we get fatter still. This is so common that it is, unfortunately, looked upon as quite "natural" to get fat in middle-age. The French have a proverb which means, "To get fat is to grow old," and it is often true. But the getting fat is not the worst thing that may happen; and, as a fact, many people admire fleshiness in middle-aged people. The storage of waste matters, due to eating too much, in middle-age—especially the eating of much animal food, and the drinking of sweetened alcoholic drinks—leads to about half the headaches, backaches, rheumatics, and gout of the middle-aged.

By the time one reaches middle-age one ought to have stored up a supply of energy enough to carry one on through life. After 50, the only food taken ought to be just enough to keep one going, and not so much as to leave waste matters in the system, to produce headaches, and rheumatism, and gout. Much meat and alcohol are the two chief offenders. The middle-aged man or woman cannot only do well with very little of them, but will actually enjoy life better in every way with as little as possible of them. He will have a clearer mind and more active body if he takes only what he requires to keep up a fair weight. Let those of our middle-aged readers who have tried this plan bear witness to our truthfulness.

In conclusion, we warmly recommend all middle-aged people, married or single, male or female, to read the valu-

able book by Sir Henry Thompson, entitled, *Diet in Relation to Age and Activity*.

Milk.—Of any one factor in the maintenance of the health of a family, the milk supply is without doubt the most important. It may be very good and an important factor in the growth of a healthy family. It may be very poor and responsible for much disease and ill-health.

Cow's milk, containing all elements of nutrition, is an ideal food. It is therefore destined to be almost universally consumed in vast quantities by man whatever his environment or mode of living. But unfortunately milk is also an unusually favorable soil for the growth of bacteria, the pathogenic varieties of which are man's most insidious enemies, to be feared and fought as were the wild beasts of the forest by our primeval ancestors.

In the various processes of handling and transportation which milk for city supply undergoes between its production and consumption there lurks the danger of contamination at every step, even assuming that the milk was free from disease germs when drawn from the cow. Great as is the danger under ordinary conditions, it has been enormously increased by the progressive lengthening of the time that elapses between production and consumption.

As our modern cities grew, the source of milk supply, as of all food supply, was pushed out into wider and wider encircling areas until now the inhabitants of a large urban community must frequently wait a day and a half, or two days after the milk is produced before it reaches their tables. For it must be realized that the 2,000,000 quarts of milk which New York City, for example, consumes a day, comes from 44,000 farms situated in seven different States, and some of this milk travels 400 miles before it reaches the consumer.

The commoner diseases which may be transmitted by milk are typhoid and scarlet fever, tuberculosis, diphtheria and summer diarrhea.

The methods of avoiding diseases transmitted in this way are by cleanliness and precautions at the dairy to prevent the milk being contaminated; and destruction of the germs in the milk a short time before it is consumed.

If a choice can be exercised in the source of a milk supply, procure milk from a dairy which is inspected properly and kept in a sanitary condition. Milk should only be used

from cow's proved to be free from tuberculosis by the tuberculin test. Of milk from dairy supplies not so controlled 10 per cent. is found to contain tubercle bacilli and can produce tuberculosis in children.

Milk should be kept cooled from the time it is produced until it is consumed, except during the few minutes when it is being pasteurized. This is one of the most important factors in preventing the growth of bacteria. Milk which has been collected and handled under the best conditions may have only 5,000 bacteria per cubic centimeter when sold.

A bacterial count of 10,000 per cubic centimeter is very good for bottled milk—the average being from 10,000 to 100,000. The bacterial count for milk in cans runs from 100,000 to 40,000,000 per cubic centimeter.

The advantage of using bottled milk is therefore seen at a glance.

When so many bacteria constantly occur in milk, and as the danger is so great that among these numerous bacteria some will be disease-producing ones, the only way to make milk safe to drink is by pasteurizing it. Many large dealers are now doing this by exposing milk in bulk to a temperature of 140° F. for twenty minutes and bottling it immediately in sterile bottles. All milk not thus treated should be pasteurized at home. This can be done conveniently by the use of the Freeman pasteurizer—by which milk is maintained at a temperature of 75° C. for 30 minutes. This does not render the milk absolutely sterile or kill all the spores, but it kills practically all the disease germs and is sufficiently effective to check fermentation.

Pasteurized milk should not be kept more than 24 hours.

In the home milk should constantly be kept cool and in sealed bottles to prevent the access of flies—a most dangerous source of contamination.

Shun as you would poison milk which has been obtained in small quantities from a can in a dirty retail grocery store where little or no attempt has been made to keep the milk iced or to prevent the access of flies.

Milk, Artificial Human.—(See also "Infant Feeding.")—Every child ought to be breast-fed for the first six or eight months of its life. For the first three days the milk is not very good, but the child ought to be put to the breast both because that stimulates the breast into action and because

the milk purges the child a little. *No other food is necessary* or ought to be given. When the flow of milk is well set up the baby ought to be put to the breast at regular intervals of from two to three hours during the day, for ten minutes at a time, and less frequently during the night. No crying on baby's part ought to make a difference in this. But if the mother *cannot* suckle, the child must have a wet-nurse, or artificial food. The milk of mares and asses most nearly resemble the milk of women. Cow's milk pure needs the addition of water, cream and sugar to make it anything like human milk in digestibility.

The shape and make of baby's *bottle* are important. *Two* bottles ought to be in use, and the one not in use ought to be lying in concentrated boric acid solution, to "sterilize" it free from all germs. The boat-shaped bottles are the best; there must be *no india rubber tube*. The *Ballin* baby's bottle is to be warmly recommended. It can be obtained through any chemist.

Even if there is no epidemic of any sort about, milk, even if obtained with the greatest precautions, may contain some disease germs such as the typhoid or diphtheria bacilli, the germs of tuberculosis, summer diarrhea or of septicæmia.

Danger from all these sources is obviated if the milk is pasteurized before it is given to the infant. It should be pasteurized in small bottles sealed with cotton and served in these same bottles as soon afterward as possible.

The Freeman pasteurizer is one of the simplest and most practical. Many milk companies are now selling pasteurized milk.

Mind Failure.—All diseases of the mind and failures of the intellect are becoming more common every year, and although our present day medical men know more accurately how to treat insane persons, yet our asylums become more and more crowded, and extra asylums for lunatics are built every year. There are two chief reasons given for this increase of lunacy—one is the high pressure at which we now live (*see "Simple Life"*), and the other is the widespread prevalence of intemperance. Nearly three-quarters of all mad persons who have not inherited insanity have drunk to excess.

A man may be said to be insane when his conduct continues to be markedly out of touch with his surroundings

and with his neighbors' ways. Physicians are often able to detect the signs of a coming attack of madness before they are noticeable by other persons. It is not usual for madness to appear quite suddenly, except when persons mad with drink get delirium tremens, and then pass on into the state of mania. Neglect of suitable treatment in the early stages of insanity defers the time of recovery in a very marked manner. Epileptic persons, after a long course of fits, are very apt to drift into madness.

Insane persons fall into several classes, as, for example:—

(1) Maniacs characterized by excitement, violence, and passions, want of sleep, causeless attacks of anger, neglect of duties, and distrust of relatives and friends; disordered reason and confusion of ideas. Such patients are often mischievous, and will injure their friends and attendants. (2) Melancholics. These are in a state of sadness and gloom; they despair of all things, often refuse food, will not talk to others, and sit alone in solitude. (3) Demented persons. These have lost whatever intellect and mental power they may have had; they are weak-minded, like children; have dirty habits, and cannot understand the common decencies of life. Memory is lost, not so much of the great events of their lives, but of the happenings of the last few hours. (4) Monomaniacs, who have peculiar ideas, desires and actions in some special direction. For example, some think of nothing but religion, others only of love-making; others, again, are possessed with the wish to set fire to buildings; others seek to kill men and women around them; and a last class are suicidal. (5) The fifth class are sufferers from paralytic insanity—a disease which runs a short course, and is shown by a gradual onset of palsy, accompanied by insane thoughts and actions. In these cases the sufferers are often full of self-esteem, and think themselves gods, and kings, or millionaires; they lose the power of speech, and in a gradual manner paralysis spreads all over their limbs; they become mere animals, and sink into death. (*See also "Madness."*)

Miscarriage, Causes of.—By miscarriage is popularly meant the birth of a child long before its time, and before the pregnancy is seven months old.

About 37 per cent. of child-bearing women miscarry before they are thirty; and it is commonest before the fourth month. The causes may be classified:—

- (1) Causes due to the father—syphilis, malaria, etc.; advanced age.
- (2) Causes existing in the mother—syphilis and fevers, jaundice, albumin in urine (kidney disease), severe morning sickness; too long suckling of previous child; severe rheumatism; mental shock or worry; diseases of the womb; heart or liver disease; direct violence.
- (3) Causes in the unborn child—its death; its strangulation in the womb.

Abortion.—To “procure an abortion” is to cause a child to be born before its due time; and this is a *serious crime*, whether committed by the mother who bears the child or by any other person except the doctor. A properly qualified medical man may induce premature labor, if, after consultation with another medical man, he decides that to allow pregnancy to continue until full term would probably or certainly prove fatal to the mother. But in any case the proceeding is a violation of nature, and is very often followed by chronic ill-health. There are certain drugs sold by unscrupulous herbalists to women for the purpose of abortion. Not only do they fail in their intended effect, but they invariably produce local disturbance, and sometimes even lifelong illness. The advertisements of such unscrupulous and heartless quack medicine vendors are easily recognized, as they generally profess to “remove obstructions.”

Mortification.—(See “Gangrene.”)

Mosquitoes.—It has recently been discovered that certain kinds of mosquitoes are the sole means of the transmission of malaria.

Other diseases which they are capable of transmitting in southern climates are yellow fever, break-bone fever, and filariasis—the cause of elephantiasis.

When we reflect how simple are the precautions necessary to annihilate this pest, and how effective when carried out properly, we realize that there is no excuse for anyone getting malaria or these other diseases.

They may be gotten rid of by three methods—drainage, kerosene, or fish which devour their larvæ.

Mosquitoes cannot breed except in water. Therefore, if stagnant water is done away with there can be no mos-

quitoes. The eggs are laid on the surface of the water and hatch out as little black wrigglers which live in the water for several weeks until they finally become transformed into mosquitoes.

The following are the methods used to prevent their breeding:—

Ditching—to drain stagnant pools, puddles or marshes. Clear away old cans, pans which collect water, and repair gutters in which water collects. Screen barrels, tanks and cisterns. Weeds and shrubbery in which the mosquitoes can find a dark, cool place to hide during the hot part of the day, or when the wind blows, should be cut down.

When pools of water cannot be drained, it is an easy matter to kill all young mosquitoes in them by pouring a little kerosene on the water. If the kerosene is washed away by rains it must be renewed in ten days, before any mosquito eggs have been developed into adult mosquitoes.

Minnows, goldfish and other fish feed on the mosquito larvæ, so by introducing these into a pond the number of mosquitoes that breed there may be greatly lessened.

Whenever a person is suffering from malaria or yellow fever he should be screened so that he cannot be bitten by mosquitoes which may become infected and later, by biting other people, convey the disease to them.

Mothers' Marks.—(See "Birthmarks.")

Mucous Membranes.—The *mucous membrane* is practically to the inside of the body what the skin is to the outside. It is the thin lining of the inside of the body, of the inside of the mouth and lips and nostrils, and of the rectum and of the urethra, and of the womb. It is always moist, because it is lubricated with *mucus*; and pink, because it is so thin that you can see the color of the blood through it. (See "Polypus.")

Mumps.—This is a very contagious ailment, occurring only once in the same individual, as a rule about two or three weeks after exposure to the infection. The patient first feels "out of sorts," and has a rather sore throat. Then comes swelling of the gland round and below the lobe of the ear, and then of the glands beneath the jaw on each side. There are feverishness and faceache too, and the patient cannot chew or swallow properly. These symptoms subside in about a week and then convalescence

begins; but in some cases this stage is unpleasantly marked by swelling of the testicles (in males), or of the breasts and ovaries (in females), and—rarely—these temporary swellings may result in *atrophy* (wasting away) of one of the organs affected.

Patients with mumps ought to be isolated so that other children do not catch the disease, and they must not be allowed to mix with their companions again till after *four weeks* have elapsed from the beginning of the disease. No special treatment is required, except that dictated by commonsense. Poultices may be needed to relieve the face-ache, and a doctor should be called in if the testicles or breasts become swollen.

Mussels.—Unwholesome mussels may cause nausea, vomiting, and severe purging, leading to rapid exhaustion. These poisonous effects may arise either from the mussels being stale and decaying, or from their having been collected out of water rendered impure by sewage contamination, or because they have grown upon timber containing copper nails, or sheathed with copper as often occurs in docks and locks. The poisonous material needs to be removed by vomiting, so give emetics (*see list*) of ipecacuanha, zinc sulphate, mustard and water, and also a brisk purgative dose when the sickness is over, such as castor oil (two tablespoonfuls), or black draught of Epsom salts and senna; if there is much collapse, brandy (a tablespoonful in a little water, repeated in 15 minutes) will be needed.

Nervous Debility.—A great number of people are always complaining of being weak and nervous; indeed, the state of nervous debility seems to be the most common of all ailments nowadays, and the young, who ought to be strong, seem to suffer more often than those who are past middle life and might reasonably be expected to be feeling the weakness of old age gradually coming on.

There are hundreds of quack medicines which are warranted to cure this state of ill-health; but we fear that they are not very successful. The symptoms of this nervous weakness as recounted in advertisements are *general weakness, and loss of appetite, headaches, and sleeplessness; indigestion, flushings of heat in the face, and coldness of the feet and hands; nervous tremblings, and a feeling of timidity and bashfulness before strangers*. This is a long catalogue of very indefinite symptoms, and if you

really are weak and nervous and have some of these symptoms, you can readily fancy all the others. Nervous persons can fancy almost anything they hear spoken of, and many people of that sort fancy they have heart disease all their lives without having anything at all the matter with their hearts. Such people generally have "wind in the stomach," and they *fancy* that the pain comes from the heart. Nervous debility can generally be cured more readily by leading a simpler life, with a proper share of wholesome food, ample open-air exercise, and cold baths than by any tonic or medicine, however much advertised, provided the patient will avoid the pleasant dangers of drinking and over-much smoking. Sensible people who have no actual disease of any organs can be their own doctors, but when there is actual organic disease sensible persons will not attempt to treat themselves. If you feel nervous debility, examine yourself, and consider what kind of life you have led, and what has caused your weak state. Is it from any excesses, or late hours, or want of fresh air? Or is it from irregular meals, or from cigarette-smoking, or from an unhealthy home? Or is your weak state hereditary—has it come down to you from your parents? In any case, remove the cause, if you can find it. Women are often weak and ailing from drinking too much tea, or from drinking tea habitually which has been made too long before use, for in that case the hot water has soaked much tannin out of the leaves, and tannin injures the coats of the stomach, and lessens the appetite. There are occasions, no doubt, when a short course of tonic medicines, such as quassia, gentian, cinchona bark, and quinine, will do much good; but do not rely on them too much, nor continue to take them too long. Live as simply and naturally as possible, and avoid drugs as much as you can, and *do not take to drops of wine and spirits to keep you up, because they will gradually make you worse than ever*. Rest when you can, and get a change of air and scene whenever possible, and spend as much time as possible in the open air and sunshine (*see also "Neurasthenia"*).

Nettlerash.—The medical name for this form of skin affection is Urticaria, from the Latin name for nettle, and is so called because this peculiar skin rash resembles the white marks which are caused on a person's skin by being stung with the leaves of the nettle plant.

Nettlerash may occur in healthy persons as well as in invalids, and is generally found to have been caused by some errors in diet, or by some unwholesome food, or by chills.

The characteristic signs are the appearance of bright red patches or wheals on the skin; these are slightly raised, but smooth and flat, and have no pimples nor vesicles on them, no sores, no discharge, and no scurfiness.

The wheals are red at first, and then change a little, becoming pale and white in the middle, with a ring of pinkness around them; and as the wheal subsides the edges grow pale, and are pink in the center. They vary in shape, and may be seen any size, from a threepenny piece to the size of the palm. A patch may last only an hour, or perhaps for a day, or even longer. The wheals burst out quite suddenly, and are accompanied by a feeling of heat and by itching. Scratching gives only momentary relief, and in some cases fresh wheals show up wherever the skin is scratched.

The attack may be quite local, or it may be accompanied by feverishness. The rash may last for days, fresh crops coming out every few hours. Chronic cases are sometimes seen, in which there may be occasional crops of skin rash every few days for months or years.

This disease occurs chiefly in persons of a nervous temperament, and is often found to accompany asthmatic attacks. Persons who are habitually intemperate frequently suffer from it, and so do gouty persons. It is very common among infants. Violent emotions of the mind, passions, and terror may bring on an attack, especially in children. Unwholesome food is, however, the usual cause; tainted meat, high game, shellfish, such as mussels and oysters, crabs and lobsters, and mushrooms, are among the commonest irritants which disorder the stomach and intestines, and bring out a nettlerash; and, lastly, children with worms often suffer. As to treatment, of course the first necessity is to find out and remove the cause; if it comes out directly after suspicious food, give an emetic; if later, give a sharp purge of black draught. For some days take low diet, and a rhubarb and soda mixture, and apply eau-de-cologne as a lotion, or zinc ointment.

Neuralgia.—"Neuralgia," said a wise physician, "*is the prayer of a nerve for healthy blood.*" From this we learn

that the real cure for neuralgia lies in the improvement of the general health of the body, and not in rubbing in something to ease the pain—though that is necessary enough sometimes. Neuralgia is not a disease, but a sign of disease, of some organ or nerve. Every doctor does his best to discover the *cause* of the neuralgia first. In the meantime, until he has found it he relieves the pain as much as he can.

Anæmia is a great cause of neuralgia. If a woman is anæmic, let her try the following medicine for her neuralgic pains:—Reduced iron, 4 grains; arseniate of iron, $\frac{1}{8}$ grain; sulphate of quinine, $1\frac{1}{2}$ grains; ingredients for one pill. Take one of these pills after each meal (thrice daily) and two at bedtime. Continue this for a month or more. But the bowels must be kept freely open every day all the time; otherwise the pills will be useless.

Gout, *Rheumatism* and *Syphilis* are very common causes of neuralgia. Of course, they must be dealt with according to their nature in each case. *Lead poisoning* is another frequent cause.

The local treatment of neuralgia is important. We shall give here several useful formulæ, reminding the patient once again that it is wise to consult a doctor first of all, and find out from him what is likely to be the *cause* of the neuralgia, and what steps ought to be taken. These remarks apply specially to the *dentist* as well.

The fact that there are *hundreds* of recognized medicines in daily use (in treating neuralgia), as well as hundreds of quack remedies which are all said to “cure” without delay, will prove to the reader that the treatment of neuralgia is difficult in very many cases. We hope that something in the following list may be useful to sufferers who have failed to obtain relief from either doctors or quacks, and who are willing to take the risks which must always fall to the lot of those who “pour medicines, of which they know little, into bodies of which they know less.”

For *Neuralgia of the face and brow*.—Morphine hydrochlorate, $\frac{1}{8}$ grain; sulphate of quinine, 5 grains; chloride of ammonium, 15 grains (contains poison). Mix, and make a powder, to be swallowed in a *cachet* twice a day. (Requires a doctor's prescription.)

For *Neuralgia of the gums and jaws*. Tincture of gelsemium, 15 minims; water to one ounce. Make four such

doses. Take two tablespoonfuls of the medicine every six hours. (Should not be taken without a doctor's advice.)

For *General Neuralgic or Rheumatic Pains*.—Fellowes' sirup of the hypophosphites. Liniments to be rubbed into the painful spot:—Linimentum Aconiti (poisons if taken internally); or, Menthol 3, chloroform 3, olive oil enough, to 16 parts; or, compound camphor liniment (poison); or, Baume Analgésique Bengue.

If all medicines fail, recourse may be had to (1) Electricity, the results are generally disappointing; or, (2) Operation. The various operations which have been done to relieve neuralgia include nerve-stretching, nerve-cutting in different ways, nerve-tearing, and nerve-ligature (tying). Lastly, (3) Hypnotism.

Neurasthenia is a very common complaint nowadays. It is the medical word for nerve exhaustion, and it is caused in different ways. The tendency of the age is towards brain work, and brain workers therefore have to contend against enormous competition. The weak-nerved among them therefore break down sometimes. Then comes the abuse of stimulants—alcohol and tobacco, which are taken to whip up the tired brain—and then comes nervous breakdown. The neurasthenic man or woman has usually been a hard, honest worker, and when the breakdown comes he tries to hide it and does *not* ask for sympathy. Even if the breakdown is due to excesses and debauchery instead of to hard work he tries to hide it, and to overcome it. With *hysteria*, it is different. She (it is generally, but not always, a woman) is idle and probably plump and well-nourished, and *craves* for sympathy; in fact, she will stoop to almost any deception to get the pity and sympathy she craves. Her aches and pains and sleepless nights are mostly imaginary, though she at last begins to deceive even herself, and she pities and loves herself sincerely. The neurasthenic man or woman suffers from a feeling of oppression at the top of the head, a poor memory, sleeplessness, irritability, fear of being in open spaces in the streets, and melancholy. He may be wasted in body. The two diseases, neurasthenia and hysteria, are generally quite distinct, but in women both may be present together. When they are distinct they differ, as we have said, in the attitude of the patients towards sympathizers; and in this—that hysterical women are very difficult to cure because

they often do not really desire to be cured, whereas neurasthenic people wish with all their hearts to be cured so that they may be able to resume their work.

The proper treatment of neurasthenia requires time. First, there ought to be a *complete change*—a change of scene, of air, of occupation and of faces. This partly fulfills the second requirement, which is *rest*, which ought to be absolute. There ought to be absolutely no business worries, no business letters and nothing to do but idle the time away. The third requirement is *plenty of food and fresh air*. And this method of treatment which is so good for the neurasthenic is the worst possible for the hysterical person. (See “Hysteria.”)

Neuritis, Alcoholic.—This is fairly common, especially in women who drink spirits to excess in secret. It begins with pains or cramps and tenderness of the muscles, especially those of the calves of the legs; and the patients, who love their pet vice, prefer to believe that the pain is rheumatism; and that it is *not* alcohol which is making them ill. In fact, they drink *more* alcohol to relieve the pains! Then come tingling and numbness, or burning pains in feet and hands, and some weakness, which may or may not become actual paralysis. If the patient will leave off drinking she may recover completely, but otherwise the trouble will increase; and she will become suspicious and disagreeable and fretful, and believe ill of everybody, and fancy that people are persecuting her. It often happens that in these cases the relations and friends cannot imagine what is happening to the patient or what makes her so ill and disagreeable. A doctor will often suspect a woman of secret drinking for months or years before he is able to find her out. He may feel sure all the time that her illness is caused by the spirit-drinking, and yet be unable to make her confess to it. A woman who drinks to excess is the worst of liars, and there is hardly a depth of meanness or deception to which she will not stoop to obtain and conceal the drink which is poisoning her blood.

Treatment.—The first thing to do is to deprive the patient at once of all alcoholic liquor. This is sound treatment, though if terrible depression follows, or vomiting or delirium takes place, the patient and her friends will very likely attribute the new trouble to the sudden deprivation of alcohol instead of to its real cause, the alcohol itself.

But even though the patient protests that she will die if she doesn't get more drink it must be withheld or she will not recover.

There are exceptions to this rule, however, which the experience of a doctor only can decide. To allay the craving for drink which now begins with great fury, *food* must be given by a firm nurse every hour, or thereabouts—a little liquid food of some kind in small quantities at short intervals. Then a teaspoonful of the following medicine should be given in soda-water every hour while the craving is intense:—Spirit aromatic of ammonia, 4 ounces; tincture of cinchona, 2 ounces; solution of hydrochloride of strychnine, 1 drachm; tincture of capsicum, 1 ounce. (*Poison.*)

Then, as to the local treatment of the neuritis, rest in bed is necessary, and cocaine injections under the skin very often give much relief. In bad cases the sufferer must lie on a water-bed. Twice a day hot fomentations ought to be applied to the most painful parts of the limb, and after being dried well, the limb must be wrapped in cottonwool or woodwool tissue. Warm baths are often comforting. When the pain is better the wasted muscles need electrical treatment or massage. *Note.*—Neuritis is not caused only by alcoholic excess, though that is by far the most common cause; nor does it occur only in women. Men are liable to it also, and especially those whose work brings them in contact with certain chemical poisons, such as arsenic, lead, mercury, silver, etc., and those who are afflicted with gout, gonorrhea, syphilis, influenza, beri-beri, diabetes. (*See also "Lead-poisoning."*)

Neurosis.—This word means a "nervous" condition which is not caused by any discoverable alteration in the brain, spinal cord, or nerves. Such diseases are hysteria, asthma, neurasthenia. A family is said to be *neurotic* when there is a family history of one of the neuroses. Madness in some forms is a neurosis.

Nightmare.—Horrible dreams, as of falling over a precipice, being strangled, being crushed, and so on, are generally due, in adults, to too much supper or to such items of diet as cucumber, pastry, mayonnaise, pickles and cheese. We all remember how Scrooge, in that wonderful old story of Dickens', believed that Marley's Ghost was nothing but a nightmare, and told him that he (the Ghost) might be nothing more than an undigested bit of beef. Some adults

have these dreams only when they sleep on their backs, and they should tie an empty cotton-reel around the waist to prevent their being comfortable on their backs.

Night-Terrors.—These occur in nervous and excitable children, especially those of precocious intelligence, whose active little brains give them vivid dreams. The doctor must be consulted in every case of these “terrors” in children. The cause must be looked for. It may be nothing more serious than the irritation of the nervous system caused by teething; or by worms in the bowels; or by indigestion. But the terrors may be due to some foolhardy and ignorant nurse-girl who tells the children ghost stories or threatens absurd punishments for naughtiness. Children who are very sensitive should not be put to bed in a quite dark room—there should always be a night-light. Adenoid growths seem to “predispose” to night-terrors. No medicine should be given in these cases without the express orders of the family doctor.

Night Sweats.—Children with rickets often perspire very much at nights, especially about the head and neck. The treatment is the general treatment for rickets.

Persons with *consumption of the lungs* sometimes wake up drenched with perspiration. This is very weakening if it continues long. The following pill, given at bedtime, will stop the sweating in many cases:—Oxide of zinc, 2 grains; extract of belladonna, $\frac{1}{16}$ grain; extract of hyoseyamus, 1 grain. To make 12 pills.

If this fails, however, try picrotoxin (*see* “Consumption”) or give five grains of sulphonal at bedtime instead. If there is diarrhea as well as sweating the patient will improve on 10 grain doses of calcium phosphate.

Noises in the Ears.—The treatment of these must depend upon the cause, which may be wax in the ear, a polypus, catarrh, decayed teeth or some other unexpected condition. We can only give a prescription or two in the hope of relieving some who suffer from this distressing symptom. First, however, let the sufferer get the ear well cleaned out by syringing with boric acid lotion. (Also *see* “Ear Diseases.”)

(1) Apply a blister behind the ear; or, (2) rub veratrine ointment into the skin round the ear; or, (3) take ten minims of the tincture of digitalis in water every four hours; or, (4) take fifteen grains each of ammonium bro-

midé twice a day. (5) Fowler's solution, 1 drachm; bromide of sodium, 2 ounces; aromatic spirits of ammonia, 2 ounces; camphor water to 12 ounces. Take one tablespoonful of the mixture thrice daily after meals. Of course, before beginning with any of these medicines the sufferer will make sure by getting the advice of an aurist that there is no local *curable* condition.

Nose-Bleeding may occur from knocks or blows, or from over-fullness of the blood vessels. In moderate quantity it rarely does any harm, and is checked by bathing the face with cold water, while the patient sits down quietly; loosen the collar, and calm him, if alarmed. The sudden application of cold, such as of a cold laundry iron, to the bare back between the shoulder blades, often stops the bleeding by giving a shock to the nervous system. Nose-bleeding may occur in women instead of some other usual loss of blood, and even in pregnancy, in a similar way. Some persons are born with a special liability to bleed, especially at the nose. After middle-age, nose-bleeding often shows a dangerous state of internal congestion and averts an attack of apoplexy.

Never allow a person with nose-bleeding to hang his head over a basin. Keep the head high and apply cold to the nape of the neck. When simple treatment fails to check nose-bleeding, it is necessary to spray the inside of the nostrils with an astringent lotion, such as alum in water—a teaspoonful to a tumbler. In cases of violent bleeding, which you cannot stop, you may paint the inside of the bleeding nostril with glycerine of tannin, by a long, fine, soft brush, or blow powdered alum or tannin into the nostrils from an india-rubber bag, or insert a cone of cotton-wool, dipped in some alum or tannin solution, into the nostrils with a probe. These modes of treatment, however, require skilled hands and special apparatus, so a doctor should be sent for. If all these fail, the surgeon will have to plug the nostrils behind as well as in front by means of a special instrument called a *nasal sound*.

Overlaying.—(See “Babies Lost.”)

Oysters, Risk of Eating.—Oysters are a very nutritious food, and when eaten raw are very digestible, but when cooked are not suitable for invalid diet. Oysters are grown in shallow sea water at certain sandy places along our coasts, and there is always the risk that they may have been

tainted with sewage. All sea-coast towns drain into the sea and very often there are currents which carry foul matters along the coasts instead of more directly into the ocean. Contaminated oysters cannot be distinguished either by sight or smell, but when eaten may give rise to attacks of typhoid fever, which may end fatally; such attacks may not show themselves for a week or two after taking the poisoned oysters.

Pain.—Students of human nature will probably agree with almost complete unanimity that since the world began mankind's greatest curse has been *pain*; yet, paradoxical as it may seem, very casual consideration will prove convincingly that this same specter pain is, in reality, the greatest blessing ever bestowed upon mankind.

The power of pain to emphasize the appreciation of pleasure (a dictum frequently dwelt upon by the old philosophers) may be put aside for the present, for the importance of pain has a much more direct bearing upon the subject here at hand.

It is *pain* which calls the attention of the human being, no matter how low in the social order, to the fact that he is experiencing some abnormal condition which if not heeded and corrected may result in the cessation of his earthly existence. Not infrequently it is pain alone which stands between him and physical annihilation if this indicator is not heeded. For without this symptom, in many inflammatory conditions of vital organs, relief would not be sought until the time had long passed when hope of relief from medical or surgical agencies would be of avail.

The importance of *pain* as a symptom, then, having been established, it becomes of the greatest importance to the average human being to be able to appreciate what forms of pain may be trivial and capable of relief by home methods, and what forms are serious and demand the quickest possible relief by expert agencies.

On general principles it may be stated that pains in the extremities rarely immediately threaten life and may be temporized with; while pains in the trunk or head may indicate the involvement of a vital organ, and any temporizing may have fatal consequences. Therefore, in attempting relief of such pains, the average human being should feel very sure of his ground before attempting to relieve such pains without expert opinion as to its cause.

Pains may be roughly divided into the following forms:—

Inflammatory, neuralgic, tumors, foreign bodies such as stones, pressure pains (as e. g. aneurism), chemical poisons and functional pains.

Functional and neuralgic pains should only be diagnosed after a process of exclusion of other forms, and rarely prove fatal. Any one of the other forms, however, may indicate a condition capable of resulting fatally.

The causes and treatment of the various forms of pain are best considered under the various disease headings. The interpretation of many pains is so complex that only a trained diagnostician is competent to adjudge them correctly. This is emphasized by the fact that many pains are “referred pains” caused by a condition remote from the apparent site of the pain. Moreover, the most serious conditions are not always announced by the most severe pain.

Therefore, unless a pain is thoroughly understood, do not delay in having its cause determined by a competent medical authority, and do not belittle this—“God’s greatest gift to man.”

Paralysis.—The old-fashioned English name for paralysis was *palsy*, but this word has gone very much out of use of late years. It will be found in Bible stories. The word means a state of disease in which there is a loss of muscular action, a loss of power to move some part. Thus, for example, there are facial palsies, in which the face muscles have lost their uses, and the face on one side, or both, is expressionless. Another variety is seen in painters and others who have lead colic; in such patients we may find a partly useless hand or a dropped wrist. The most common cases of paralysis are, first, those cases called *Hemiplegia*, in which one side of the body, one arm and leg, are palsied, and, secondly, *Paraplegia*, in which both legs are palsied, but not the arms. The first is due to brain mischief, either softening of the brain or bleeding into the brain; the second is caused by disease or injury to the spine. Either of these diseases may be recovered from in some cases, but in others a fatal result ensues. Simple palsy of one side may last for years, and never improve; some such cases remain bedridden all a lifetime. We cannot say that any medicines have power to cure palsies, ex-

cept those caused by syphilis, and when cases recover it is "Nature" which effects the cure.

Hemiplegia, or paralysis of one side, is generally of sudden onset, coming on with an apoplexy, commonly called a fit, or a paralytic stroke. (See "Apoplexy.") In such cases a blood vessel has burst in the brain. If of slow onset, it is due to the "softening" or decay of some spot in the brain. A sudden loss of the senses occurs often accompanied by a fall; the patient cannot be roused, as he can from a faint; also, instead of the pale face, seen in one who has fainted, there is often a purple tint of face, with difficult noisy breathing. One cheek hangs loose, and the other cheek is drawn aside; there may be a squint, and one eyelid may drop uselessly. The patient is unable to speak, from part of the tongue having lost its power; saliva often dribbles away. When the insensibility passes off it is found that the arm and leg of one side cannot be voluntarily moved; they may be flabby or stiff. Some cases die even in the moment of the fit; others live for hours or days, and die without regaining consciousness; the result depends upon the situation and amount of the brain mischief. When this is slight the signs of recovery may come on very soon, and complete disappearance of all the symptoms may ensue in a few days or weeks. But in the majority of cases some weakness (called Paresis) is left, even if there is no definite palsy, and the patient is an invalid who has to take great care of himself for the rest of his life. Electricity and massage may be necessary, but not very much good is to be hoped from electrical treatment. Massage of a paralyzed limb is always grateful to the sufferer. The possibility of a second attack has to be borne always in mind, and the patient should particularly avoid excess of alcohol and should live on a very light diet.

Paraplegia is commonly the result of spinal disease, especially in children. And there is another type of paraplegia (paralysis of the legs) with spasm added to it. Nothing can be gained from dealing more fully with these subjects in this book. (See also "General Paralysis.")

Pathology.—This is the science which treats of the changes produced in the body by disease.

Personal Hygiene.—Man's health is maintained by caring for the condition of his body and his environment. To the latter the term sanitation is usually applied.

Hygiene implies a somewhat closer association with the body, and by personal hygiene is meant care of the body which will improve its physical condition and prevent the contraction of disease.

Personal hygiene is a large subject and can be dealt with fully only at great length; but there are a few rules of right living which may be conveniently mentioned in brief—the observance of which would do much to diminish the amount of sickness and ill health.

Skin.—This is a protective against the entrance of germs into the body and assists in the purification of the blood and the regulation of the loss of heat from the body, mainly by perspiration.

It is important to keep the skin clean because dirt interferes with perspiration and the other skin functions, favors skin blemishes, boils and abscesses, and the harboring of parasites and germs of disease.

To this end a daily cleansing bath of hot water with soap is advised—preferably at night.

Mouth.—The mouth harbors many of the germs of disease—even when the person feels perfectly well. If anything occurs, however, to lower this person's resistance to disease—as e. g., chilling—these germs may obtain a foothold and cause disease. Therefore efforts should be made to keep the mouth as germ free as possible by the use several times daily of some pleasant mouth wash or antiseptic such as listerine, glycothymoline, borine, alkalol, borolyptol or alkaline antiseptic fluid of the pharmacopeia.

Lungs and Nose.—The air of cities is full of germ-laden dust. To prevent the entrance of this dust into the lungs breathing should be done entirely through the nose where there is a filtering apparatus capable of removing dust impurities from the inspired air.

The air thus inspired is also warmed before it reaches the lungs.

Dust which is removed from the air by the nasal filter should be removed from the nose at least twice a day by the use of a nasal douche containing a weak antiseptic solution such as dilute glycothymoline, alkalol or boracic acid.

If the nasal passage is obstructed, the obstructions should be removed. The commonest form of obstruction in the naso-pharynx is lymphoid tissue or adenoids.

Signs of obstruction are—open mouth, a vacant, unintelligent expression, snoring, frequent colds and nasal discharge, mental dullness, deafness and cough.

For the proper development of the chest and lungs deep breathing is strongly recommended.

Stomach and Intestines.—The first great rule of digestion is not to eat too much. The simple articles of diet are the best. Temperance in the use of alcoholic drinks is highly recommended.

The intestines should be emptied every day or two. Laxatives may be necessary, but the natural means are preferable. These consist in the use of articles of diet which have a coarse residue and in exercising the abdominal muscles. Enemas may prove a useful adjunct.

Digestive ferments to aid digestion are not recommended for continuous use. Healthy out-of-door exercise is the best appetizer.

Hair and Nails.—Disease germs are readily harbored beneath the nails. They should be kept short and cleaned daily with a small sharpened piece of wood which is to be immediately destroyed.

The hair is a prolific gatherer of germs. It should be washed at least once a week and the scalp rubbed at the same time.

Ringworm and lice are the two most common parasitic diseases of the scalp and hair. The former requires treatment by a physician.

To remove lice cut the hair short and apply a mixture of equal parts of olive oil and kerosene twice a day for several days.

Hearing.—The most common causes of defective hearing are adenoids, wax in the ears and inflammation or abscess in the middle ear from inflammation or disease of the nose or throat. Wax and adenoids should be removed.

Early attention to diseased throat and nose conditions will often prevent permanent deafness.

Eyes and Vision.—The eye conditions requiring attention are ophthalmia, trachoma, conjunctivitis, and functional diseases from eye-strain.

Most ophthalmias occur at the time of birth and can be prevented by dropping a drop of 1 per cent. solution of silver nitrate into the eyes of the new-born child.

Trachoma is a contagious disease requiring medical

treatment. It can be avoided by avoiding people who are suffering from it.

Conjunctivitis usually occurs from over-strain or from dust which gets into the eyes.

Daily use of a $\frac{1}{2}$ per cent. solution of boracic acid will relieve it.

Eye-strain can be avoided by avoiding too continuous eye work, fine and indistinct work, faulty lighting of the room, and bad posture in reading or writing.

Nervous system.—Hygiene of the nervous system is more or less complex. It consists largely of avoiding worry and strain and maintaining a good reserve force of the body. The latter is accomplished by proper food, sufficient sleep, exercise and daily baths, with occasional vacations.

Cheerfulness, happiness and avoidance of irritation are great aids in the maintenance of a healthy nervous system.

Sleep and Rest.—The amount of sleep required varies with the person and his work. The child usually requires from 10 to 12 hours of sleep; the young adult about 9; the adult of middle life usually finds 7 to 8 sufficient, while old people can usually do with less.

Sound, refreshing sleep is favored by a well-ventilated room (all the windows should be open), absolute quiet, darkness and a warm bed.

Baths.—Warm baths cleanse the skin and thus promote its healthy functions. They may be taken weekly, bi-weekly, or even once a day—preferably always at night. Warm baths have a temperature of 85° to 100° F. Hot baths range from 100° to 110° F., and should usually be followed by cold sponging or a cold shower.

Cold baths are not cleansing, but have a stimulating and tonic effect and reduce the liability to catch colds. They should be taken every morning. Cold shower baths are more invigorating than cold tub baths.

Swimming baths provide physical exercise and promote health. Salt water baths are usually more invigorating than fresh water baths.

Turkish, Russian and hydro-therapeutic douches are admirable tonics—though to be classed as luxuries.

Baths should not be taken too soon after meals, because digestion may be lessened or entirely stopped by the blood being called from the stomach to the skin and muscles. In cold baths the head should be immersed first to avoid

increasing the blood pressure in the brain too greatly, which might result if the body were gradually immersed from the feet upward.

Clothing.—The best rules for clothing are those which ordinary intelligence dictates. Simple general rules are to keep the head cool and the extremities warm; avoid tight constricting bands; and wear cool clothing in summer and warm clothing in winter.

For summer wear the light colors are preferable, and cotton and linen fabrics will generally be found the coolest.

For winter wear wool, silk and fur are the warmest. Underclothes of wool are the warmest and those introduced by Jaeger are the most comfortable and serviceable.

The much condemned corset of women's wear is undoubtedly harmful—if for no other reason than that it interferes with free respiration as well as exerting pressure on the abdominal viscera and producing constipation.

The most important sanitary precaution to preserve in reference to clothing is that of cleanliness. While dark clothing does not show dirt as well as light it accumulates just as much, and should be cleaned just as often. The greatest precautions in regard to cleanliness are required in the case of those articles of clothing worn next to the skin.

Exercise.—(See “Exercise and Recreation.”)

Temperance.—The long-continued, immoderate use of alcohol leads to degenerative changes, primarily in the stomach and liver, and at a later period in the kidneys, lungs, brain and blood vessels. The degeneration is characterized by increased growth of interstitial fibrous tissue, which in course of time shrinks and causes atrophy of gland cells and loss of function. Chronic catarrh and cirrhosis of the stomach with cirrhosis of the liver, followed by dropsy and hemorrhage, are the well-recognized results of alcoholic intemperance.

The effect of such intemperance in shortening life is now universally recognized. Statistics bear overwhelming evidence on this point. It may be stated generally that the mortality of the intemperate is from four to five times greater than that of the strictly temperate of the same age and in the same class of life.

All evidence points to the fact that alcohol, except in strict moderation, is injurious to men who are exposed to

extremes of climate (great heat and great cold), or who have to undergo great bodily or mental labor. Its effect on the circulation is distinctly injurious to those engaged in hard bodily work, for it causes the heart to do more work without conferring any counterbalancing advantage.

In strictly moderate doses alcohol has not been proved to do any harm; and, taken in the form of beer or wine, many of the inhabitants of our large towns find it a useful aid to digestion and assimilation. But it must be remembered that there are idiosyncrasies as regards alcohol, and that what is harmless to one individual may be injurious to another. For thoroughly healthy people, alcohol in any form presents no advantages, and for children and young people it is decidedly injurious.

Worse than all other dangers from alcohol is the danger of the alcohol habit. This invariably leads to loss of efficiency, dependence, insanity or even worse.

Sex Hygiene.—The defective or degenerate of the human race should not be allowed to propagate.

To produce healthy children and ones not prone to disease, both parents should possess good constitutions, and they should take great care not to weaken these by excess of any kind, physical or mental. In this climate the proper age for marriage is considered to be about twenty-four or twenty-five for the man, and nineteen or twenty for the woman.

A disease may be hereditary—as syphilis—or only a predisposition may be hereditary, as in the case of tuberculosis.

Marriage between relatives is reprehensible—the danger increasing with the nearness of the relationship.

Before a marriage is contracted it should be a certainty that neither party is suffering from syphilis or gonorrhea. Other diseases which are very liable to reappear in the offspring, especially if present in both parents, are scrofula, gout, hysteria, epilepsy, insanity, some physical deformities and skin diseases and criminal tendencies of various kinds.

Unhygienic Habits.—There are certain unhygienic habits which need but to be once called to the attention to be discontinued.

Such are the following:—

Putting articles into the mouth—such as pencils, coins,

candy, chewing gum or any other object that has been in the mouth of another person.

Allowing the unwashed fingers to touch the face, eyes or lips.

Spitting, or coughing and sneezing without protecting the mouth with a handkerchief.

Washing the teeth in a wash basin which is used by other people for washing purposes.

Allowing children to play in the dirt.

Careless disposal of excreta.

The use of a common drinking cup and the drinking of impure water.

Kissing babies on the mouth.

Perspiration.—(1) *Offensive* (sweating feet). The feet of dyspeptic people often smell offensively, especially if they have to stand a great deal. In these persons the armpits also are apt to be very offensive. The digestion must be attended to first; and the armpits and feet are to be washed daily in a lotion made of carbolic acid 1 part and water 39 parts. After drying well, dust the feet with boric acid powder and starch, equal parts, or with talc powder. The socks or stockings are to be wrung out of a corrosive sublimate lotion, 1 in 2,000, and then dried, before being worn. And, as the bacilli, or germs, which cause the evil smell, flourish in the damp leather of boots, the insides of the boots ought to be wiped out with a wet rag dipped in the same lotion, occasionally.

(2) *Excessive* sweating.—This is a sign of general debility, and must be treated with tonics. (See “Night Sweats of Consumption.”)

Physiology.—This is the science which deals with the duties and functions of all the parts and organs of the (human) body, when it is in a state of health.

Piles (called by doctors, “HEMORRHOIDS”).—Piles are varicose veins of the rectum or lower bowel. It is usual to speak of *external* and *internal* piles. An *internal pile* is a swollen vein in the inside of the bowel, just inside the anus; and an *external pile* is one which, perhaps, was once internal, but which has come out through the opening during straining at the water-closet, and which has been squeezed and bruised by the muscle which closes the opening until it has become inflamed and bleeds. External

piles tend to get well, and to leave behind ridges and tags of hard skin hanging just outside the anus.

Causes.—A sedentary life, constipation, sluggish liver, overeating, alcoholic disease of stomach or liver, pregnancy.

Signs.—A person may have external piles for years without caring anything about them, though suffering much discomfort when the bowels are costive. But when they get *inflamed*, there is a feeling of weight and great soreness at the anus, pain during the passage of motions, itching and throbbing, and perhaps irritability of the bladder and a frequent desire to pass water. When piles get really inflamed and swollen the patient cannot even sit down in comfort. Then the piles will suppurate and discharge pus. This process is often Nature's way of bringing about a cure; the piles get filled up with blood clot and shrivel up.

Internal piles show their presence by bleeding, which, if copious and too frequent, may be a danger to health. But, generally, the loss of an ounce or two of blood by piles is a good thing for the patient, and may save him headaches, apoplectic strokes and attacks of illness.

Treatment.—(1) *Palliative.*—A spare diet, especially avoiding alcoholic drinks, much meat, and spiced foods. The bowels must be kept always a little *loose*, not with strong purges, but with gentle laxatives like magnesia, confection of senna, brimstone and treacle, castor oil, phenol phthalein tablets, licorice powder—and *not* calomel, aloes, colocynth, jalap.

When piles are acutely inflamed.—Take two grains of calomel at bedtime and a dose of castor oil (half-an-ounce) in the morning. Take hot hip baths or use hot fomentations. If an external pile, with a blood clot inside, is inflamed and tender, send for a doctor, who will probably puncture it.

If you have internal piles, especially bleeding ones, which come out every time you go to the closet, you must gently press them back again, and use a collapsube of ointment of galls and opium, or of hamamelis and cocaine, or of ferric perchloride. Regular exercise is essential in all these cases. Conium ointment is also an excellent soothing application.

(2) *Operative.*—The operations for piles are called "excision" and "ligature." Of course, they are entirely outside the province of home-doctoring. But it is quite

certain that many a man and woman whose piles are a lifelong nuisance to them would be immensely relieved by the simple and safe operation for the removal of their piles. Such an operation would lay a patient up only for about a week and the relief would be immediate.

Pleurisy.—This is an inflammatory disease within the chest. It is accompanied by fever in the acute form, but may become chronic, and may last for weeks without any fever being present. It is an inflammation of the pleura, or serous membrane, which lines the inside of the chest, and also covers the surface of the lungs, so that the two surfaces of the membrane glide over each other with every breath that is taken. These movements are quite unfelt in a state of health, but when pleurisy has come on each breath taken and every movement of the chest causes pain, which in acute inflammation may be of a very acute nature. In health the pleural surfaces are smooth and moist, but when inflamed there is at first dryness, then roughness and tenderness. After some hours of the disease a change occurs and some fluid is poured out, and some flaky, white, solid material is deposited. The fluid which is formed collects in the chest cavity around the lung, and if the quantity becomes great it compresses the lung more and more and renders it unable to expand. At first this pleuric effusion is a clear, pale yellow, watery liquid, but if the inflammation continues the clear effusion becomes opaque and purulent, like the contents of a boil or an abscess. This is called by doctors *empyema*. This is a very serious state of disease and very often leads to early death. Pleurisy is generally set up by catching cold from exposure to cold and damp; in healthy persons attacks are usually short and easily cured, but if pleurisy attacks a consumptive child or young person it is always a serious matter. On the other hand, in a person who has consumption of the lungs, local pleurisy is one of Nature's methods of trying to localize and heal the mischief.

An attack of pleurisy begins with a feeling of chilliness and a shivering fit, followed by flushes of heat and thirst, headache and a burning skin; there is acute pain somewhere in the chest, most often in the side, and a dry cough, which much increases the pain. Either one or both sides may be affected. The pulse is hard and quick, and the breathing is rapid; there is restlessness, and a feeling of anxiety, and

the urine is scanty and high colored. As soon as these symptoms are observed, the patient must give up and go to bed, have a hot bath, and then lie between blankets, take a sharp purgative, and put a hot linseed jacket poultice, with a little mustard, on the painful part of the chest. A doctor must take charge of the case at once. (*See "Poultices."*)

Pneumonia.—(*See also "Lung Diseases."*)—Men, women and children are all liable to pneumonia, in which the chief trouble is inflammation of the lungs. The persons who run most risk of it, and who are most liable to die of it, are drunkards. It is slightly contagious. The disease begins quite suddenly: the patient has a shivering fit, his temperature runs up to 103° or 104° (the usual healthy temperature is $98\frac{1}{2}^{\circ}$ and anything higher than that is called "fever"); his tongue is coated, his appetite is lost, and he has a bad headache and shivering. Then he coughs in a painful way, and spits up phlegm tinged with blood. In a few hours more, he is propped up in bed with flushed forehead and cheeks, bright eyes, and panting, gasping for breath. He is very feverish, and his skin is dry. At night he cannot sleep, but wanders in his mind and talks nonsense. He gets worse and worse (and perhaps dies).

But suddenly, when he has been ill about eight days, and is very bad indeed, he falls asleep; his fever abates, his pulse rate goes down, his breathing becomes easy, his dry, brown tongue grows moist—and he wakes up feeling almost well! From that time forward he slowly but surely improves until he is all right again. Nearly all the cases of pneumonia that recover end in this way.

Here, then, is a disease which is caused by a germ, which runs its course, and which cannot be cut short. It is a dangerous disease and its treatment demands much skill.

No sensible person without a medical training would care to undertake the treatment of pneumonia on his own responsibility. The doctor will order a diet of milk, beef tea or mutton broth given in small quantities, frequently; and the patient may have a liberal amount of water to drink. Large hot linseed-meal poultices may be wanted (*see "Poultices"*). Leeches may be required. An ice bag (a gutta-percha bag to hold fragments of ice) may be called for. Alcoholic stimulants may be the only thing which will keep life in the patient in the later stage before the

crisis—as much as 8 to 12 or more ounces of good whisky or brandy daily may have to be taken. (*See* “Drachms” and “Ounces.”) The sleeplessness requires special treatment; the ice bag to the head is recommended by many doctors, but chloral must not be given even if the patient is accustomed to its use.

In recent years great emphasis has been laid upon the importance of fresh air in the treatment of pneumonia. Many cases are treated out of doors. Oxygen is freely given in many cases. *Serums* seem to be of assistance in some cases, but no *specific* has yet been discovered. The chief danger in pneumonia is heart failure during the attack and *thrombosis* and *embolism*, causing instant death, during convalescence. Therefore a patient must be kept absolutely quiet until all danger is past.

During convalescence a tonic will be required, followed later, if possible, by a change of air to a temperate sunny climate for a few weeks.

Prevention.—As pneumonia is an exceedingly common disease during winter and spring and as it so often results fatally, it is important that all possible care be taken to avoid contracting the disease. This is done first by increasing the body resistance, and second by avoiding contact with the infectious cause, or pneumococcus germ.

The body resistance is maintained by the following means:

Exercise, cold morning bath, good nourishment, little worry, little alcohol to drink and little tobacco smoking.

Avoidance of exposure to cold, draught, sudden changes of temperature and wet feet.

Pneumococcus vaccine will increase the body resistance to infection.

The infective agent is avoided by careful household cleaning, avoiding close proximity to people who are coughing, sneezing, or spitting in public places, or breathing through the nose while in their presence. Frequent careful cleaning of the mouth with antiseptic solution—especially in the morning, evening and after meals.

Poisoning.—When a person has taken poison you must send for the doctor at once. In the meantime, if you know what poison he has taken, you may be able to save him; if you do not know, you must await the doctor, but in the meanwhile you need not be idle.

FIRST CASE.—*You know what poison has been taken.* If it is *Prussic Acid* or *Cyanide of Potash* the patient will almost certainly die at once. There is no time to save him. But if he is not yet dead, and lies insensible, pale, and rigid:—

- (1) Give him a tablespoonful of mustard in a tumblerful of warm water. If he vomits, it is well; if not, put your finger to the back of his throat.
- (2) When he has been sick, give him brandy or strong beef tea or strong coffee.
- (3) Pour cold water over his head, holding him over a basin.

These two poisons are very powerful. They are used in photography and are too easily obtained.

If the poison is *Laudanum*, the patient is first excited, then depressed, then insensible. At first you can rouse him, afterwards he becomes like one dead, with noisy breathing, blue lips, and pale, ghastly face.

- (1) Give him a tablespoonful of mustard in a tumblerful of water.
- (2) March him about, stimulate him, douche him, keep him alive by worrying him in every way. If you let him alone he will die, probably.
- (3) Give him a pint of very hot strong black coffee, injected into the rectum, or back passage, with a glass or Higginson syringe.

If the poison is *Oxalic Acid*, make him swallow chalk, lime or whiting, or plaster scraped from the wall, in large quantities, washed down with water. *Don't give an emetic.* Give him stimulants and castor oil. But the acid is irritant and you cannot do much for a person whose whole mouth and food tube are inflamed and corroded.

If the poison is *White Arsenic*, there will be very little time. Give spoonful of magnesia and white of egg and salad oil until the doctor comes.

If the poison is *Carbolic Acid*, give him:—

- (1) A tablespoonful of mustard in a tumblerful of warm water.

- (2) When he has been sick, give him half-an-ounce of Epsom salts in a half-pint of cold water.
- (3) Keep him warm, and give him stimulants.

Sometimes people take overdoses of sleeping draughts. For an overdose of *Chloral*:—

- (1) Make him sick by tickling the back of the throat.
- (2) Rouse him, stimulate him, flick him with wet towels, force him to walk about, worry him.
- (3) Inject a pint of hot coffee into the rectum.

SECOND CASE.—*You do not know what poison has been taken.* In this case you must use your wits and notice what symptoms he has.

If he has *Vomiting*, *Diarrhea*, and *Colic*—he may have taken sugar of lead, phosphorus, arsenic, spirits of salts, corrosive sublimate, sulphuric acid, Prussian blue, salts of sorrel, or other irritant poison.

- (1) Do NOT give an emetic, because you may injure stomach by the vomiting.
- (2) Give *plenty* of lime water, or milk, or magnesia, or wall-plaster, or whitewash, or whiting, or chalk, and plenty of milk and water to wash them down. If he vomits them up, give him more.
- (3) When he becomes exhausted, give a tablespoonful of brandy or whisky in milk or water, and put hot-water bottle to his feet, until the doctor comes.

Smell his breath. If he has taken carbolic acid or prussic acid or laudanum or alcohol, you will know it by the smell. Phosphorus (rat paste) smells of garlic. If he is quite *insensible*, he may have taken opium, morphine, belladonna, laudanum, chloral, chloroform; or he may be suffering from *coal gas* which has escaped into the room where he slept. In all these cases *stimulation of every kind* is desirable, though no special treatment can be undertaken without medical advice.

Polypus.—This is an old-fashioned Latin word, used to mean a little tumor (or swelling) with a stalk, short or

long, by which it is attached to the mucous membrane somewhere—in the nose, the throat, the ear, the rectum or the womb. It is impossible to understand what a polypus really is without knowing what a mucous membrane is, and so you must first read the article on “Mucous Membrane.” Now, when a mucous membrane is afflicted with catarrh and inflammation (*see* “Abscess”) for a long period, during which *pus*, or matter, is always trickling over it, the membrane gets into an irritable state and a polypus is formed, which tends to drop off by its own weight, but may remain attached by a stalk.

A *nasal polypus* is a red, soft, gelatinous, mucous tumor, like a hanging pear-drop. If it gets big enough it blocks up the nostril, and then it must be removed by a surgeon. He passes a silver wire noose over it and twists it off. If the catarrh continues, of course, there may be another there very soon, growing on to the stalk of the old one. A nasal polypus generally causes deafness.

Polypus in the ear is often one of the results of years of the very common middle-ear disease, with its chronic discharge. It must be removed, by an aural surgeon, with a “snare.”

These fibroid tumors, and fibroid polypi of the womb, are very common among women in the middle period of life—so common that they are the real reason for the unfortunate stoutness of so many middle-aged women. When a woman has dull, aching, throbbing pain in the abdomen, with feelings of weight and “bearing down,” piles, costiveness, and frequent attacks of bleeding, she very likely has, in her womb, a fibroid tumor, which may or may not have become a polypus already. By that time the surgeon will be able to feel the tumor and will advise as to its removal. Short of operation, the patient may control bleeding by douches of hot water, and by taking this medicine internally:—Ammonia sulphate of iron, 30–36 grains; distilled water, 8 ounces; mix. Take a sixth part every six hours. Very hot water douches will generally stop the bleeding, and give a sense of great comfort. But, if very profuse, a solution of hemisine, or adrenalin, or supra-renaline (liquid extract, 1 part, hot water, 10 parts) will be necessary to check the hemorrhage. These three drugs, which closely resemble each other, are the very latest and

best agents for checking every kind of bleeding. Cheaper drugs for the same purpose are—turpentine, perchloride or iron and alum.

The reader will now understand that when a patient says that he or she has “a polypus,” and wants a “cure” for it, we can give no help. A polypus may occur *anywhere* where there is a mucous membrane, and its only treatment is local, and requires skill.

Polypus of the Womb.—The commonest sort of tumor of the womb is a little hard, fibrous knob, which grows and develops within the substance of the womb itself. Most of our readers know that the womb is the muscular bag in which the unborn child lives and develops until it is ready to be born. The little knob, growing in the muscular substance (the “flesh”) of the womb is gradually squeezed out of it, and bulges either into the hollow inside of the womb, or on the outside, among the coils of gut. In either case, it drags the mucous membrane along with it and when it is squeezed right out of the womb substance, it remains hanging as a tumor with a stalk of mucous membrane, either inside or outside the womb. The tumors, which happen to be squeezed outside, and lie among the coils of intestine, are not very dangerous, however large they may grow; but those inside the womb (called *polypi*) cause much pain and bleeding, and may have to be removed by operation.

Poultices are rather old-fashioned applications for applying heat and moisture to inflamed parts. They are not so cleanly as fomentations, and ought not to be used for sores or anywhere where the skin is broken, because they are not antiseptic and may even themselves contain the germs of disease.

A poultice must only just be big enough to cover the inflamed part; if it is bigger it makes the surrounding parts sodden and helps to *spread* the inflammation. When an abscess has discharged itself no more poultices must be used; their time of usefulness is over. *Before applying a poultice to the chest of a young child or old person a piece of warm flannel must be placed there first, and gradually withdrawn after the hot poultice is in its place. Thus the great heat of the poultice is brought gradually and not suddenly to the child's notice.* This is a little

nursing "tip" which few trained nurses know. *After removing a poultice, dry the skin and cover it with a layer of cotton wool.*

To make a poultice.—Have everything quite ready before beginning to make it, so that when it is made it may be applied without delay, as hot as possible; test its heat by applying it first to your own cheek. A *linseed poultice* is thus made. "Into a basin, previously scalded, place the ground linseed meal, enough for the size of poultice required. Pour scalding water on it gradually, stirring with a table knife or ivory paper knife. Spread the poultice on linen, old flannel, or tow; the tow is then folded over the edge of the meal and the poultice is ready. It is a better plan to pour the water on the meal than to sprinkle the meal on the water, unless a very large poultice is required. A *bread poultice* is thus made:—Stale white bread crumbs are dropped into boiling water and the cup in which the poultice is being made is then covered with a saucer and stood upon the hob. The water is then drained away and the pulp applied upon a piece of linen. A *starch poultice* is soothing and retains the heat a long time, and is suitable for inflamed skin eruptions. The starch is first mixed with cold water and then boiling water is added until the mess becomes of a proper consistence. A *charcoal poultice* is a good antiseptic one. Finely-powdered vegetable charcoal is mixed with bread or linseed meal and a little more charcoal is sprinkled over the surface just before applying it. A *mustard poultice* is thus made:—The mustard powder is made into a thin paste with hot or tepid water and spread in a thin layer on brown paper, and covered over with a layer of muslin. It is kept on as long as necessary, or as long as it can be borne, say fifteen minutes, unless blistering of the skin is aimed at. An *eau-de-cologne poultice* consists of an ordinary pocket handkerchief saturated with eau-de-cologne, and applied to the skin with a layer of oil silk over it. This is quite enough to produce the redness of counterirritation on some skins and the redness quickly disappears."

A hot boiled Spanish onion is a splendid poultice for earache, as its pointed end fits into the ear, keeps the heat a long time, and the juice is an antiseptic. Put a large pad of cotton wool over it and bandage on it. (See also "Fomentations.")

Pregnancy, Hygiene of.—Pregnant women must have plenty of fresh air and only moderate exercise. Walking is better than riding. All fatigue to be avoided, also crowded entertainments. *Dress.*—Tight stays, garters and collars are not to be worn. If the enlargement of the abdomen is excessive, an obstetric belt must be worn. Flannel drawers are advisable.

The bowels must be kept well open, with cascara or saline purges if necessary. A warm bath ought to be taken once weekly. If the breasts are painful they must be bandaged or supported; the nipples must be hardened by bathing with equal parts of whisky and water, or alum lotion, night and morning. The nipples, if not prominent, must be drawn out and kept out for a few minutes daily by an elastic ring placed round the bases of them. This is most important, as also is this—that in every pregnant woman the urine ought to be analyzed at least twice during the carrying of the child.

Lastly, at the periods which correspond to the courses which would otherwise be in progress, great care and caution is to be observed, as miscarriage is more apt to occur then.

Pregnancy, Signs of.—Wives are frequently doubtful as to whether they are “in the family way” or not. In many cases the skill and experience of a medical man are necessary to decide the question, but very often there is no difficulty in being sure, one way or the other, at an early date. The ordinary signs of the pregnant condition are here given, with comments:—

(1) A woman, on becoming pregnant, at once ceases her menstrual periods (*see* “Menstruation”). This is the first sign, and is relied upon by most women for calculating when the baby will be born. Precise calculation is impossible, as a rule, but the confinement may be expected about 280 days from the first day of the last menstrual period.

Fallacies.—But the periods may cease, in any girl or woman, because of *anæmia*, which must be treated by a doctor. And, very often the *fear of becoming pregnant* may cause the periods to cease for some weeks, and the *desire to become pregnant* may stop them. In fact, any nervous condition is enough to upset some women in this way. Secondly, a woman may continue to menstruate for

three or four months, even though she is pregnant, because of a polypus or other disease of the womb.

(2) The breasts of a woman feel full and hard at a very early stage of pregnancy.

(3) In the second month comes "morning sickness." The expectant mother feels sick on getting up in the morning. This is a very common sign, but is occasionally quite absent. Sometimes, however, the vomiting is a very serious matter. *Fallacy*.—Women who drink overnight, or who tippie in secret, are often sick in the morning from catarrh of the stomach.

(4) After the third month the dark circles round the nipples of the breast become very dark red instead of a rosy pink, and a drop of milk may sometimes be squeezed out of the breast. But many blonde women show no sign of this kind.

All the other signs are such as only a doctor can understand or seek for.

Psoriasis.—This has been called "the skin disease of the healthy man," and it is true that most of those who have this disease are otherwise quite healthy. Psoriasis consists in a chronic inflammation of the skin, with raised red patches, covered with silvery or yellowish-white dry scales. No one knows the true *cause* of psoriasis.

Psoriasis often appears first in childhood and then goes away again, and reappears occasionally. It occurs especially in gouty, rheumatic, and syphilitic families, and is particularly noticeable in the spring of each year. It is not infectious or contagious. The true psoriasis has silvery scales, and when it occurs in a person who has had syphilis the scales are much yellower. It can hardly be said, however, that syphilis has much to do with the causation of the disease.

Psoriasis first appears on the back of the forearms and elbows, and on the front of the knees. There are, in the earliest stage, small pimples each capped with a little dry scale, and the pimples grow or unite with others until they form patches of two or three inches wide. Then other parts of the body become affected. There is no pain or itching.

Treatment.—Of course, the first thing to do is to guess at the probable cause of the disease and to deal with any rheumatic or gouty taint that the person may have. As

to diet, it is of very little real service, as a rule, to adopt any special diet. But the writer has seen cases in which a month or two's severely vegetarian diet worked wonders in the cure for psoriasis.

The one medicine of all others which seems to have in all cases a certain amount of beneficial effect, is *arsenic*. But arsenic, though a valuable medicine in the hands of a medical man, is yet a very powerful *poison*. The dose of it is to be increased right up to the limit of toleration of the patient; until, in fact, he gets redness round the eyes. Then it is to be continued until the eruption has disappeared, and for three months after that, in gradually diminishing doses. But at the very beginning of a first attack of psoriasis arsenic is not to be given; in that stage, thyroid extract tablets may be given with advantage.

Psoriasis, then, is a disease which is not suitable in any way for amateur treatment. Both arsenic and thyroid are powerful medicines and require a doctor's prescription. A celebrated physician recommends the patient with psoriasis to swallow a 10-minim capsule of turpentine three times a day; and he increases the dose up to 30-minim doses.

Local treatment.—This is much more important and more easily manageable at home than the constitutional treatment. The best application of all is chrysarobin ointment, which must be rubbed well into the patches of the disease but must not be allowed to touch the healthy skin round about. The strength of the ointment may be, say, 15 grains to an ounce of vaseline. The ointment stains the skin and bedclothes, and if applied to the face may make the eyelids dropsical. But if it is rubbed into patches on the body, some of it gets absorbed and does good at last to the patches on the face.

In dealing with a patch of psoriasis it is of no use to rub any ointment on it until you have rubbed off the scales. Tar ointment is not so messy as chrysarobin, and the detergent tar solution may be thought even more convenient. This solution acts well if applied to the patches undiluted and allowed to dry on.

Hutchinson's excellent ointment for psoriasis is as follows:—White precipitate, 10 grains; chrysarobin, 10 grains; creosote, 20 minims; detergent solution of tar, 10 minims; benzoated lard, 1 ounce (mix).

If a patient finds it difficult to get off the scaliness, let him apply to the patches for several hours, pads of lint soaked in weak carbonate of soda solution and bandaged on over a piece of oiled silk.

Purgatives.—Medicines which act upon the bowels. The following list of purges will be found to contain something in the way of medicine suitable for the relief of all kinds of costiveness, sluggish liver, congestive headaches, dropsy and blood poisoning. (*See also "Dosage."*)

(1) *Laxatives.*—Medicines which cause very gentle purging, without griping, and with soft semi-fluid motions:—Honey, figs (especially green figs), tamarinds, prunes, brimstone and treacle, citrate of magnesia.

(2) *Aperients* produce more liquid motions and cause a little griping:—Black draught (compound senna draught), white mixture (at all hospitals), extract of cascara sagrada (adult dose, 2 to 4 grains), castor oil (adult dose, 1 fluid ounce).

(3) *Saline purgatives* are especially good for gouty and rheumatic people, and those with Bright's disease, or liver disease, or who suffer from headaches (*see also "Headache"*):—Phosphate of soda (dose, 2 drachms), Epsom salts ($\frac{1}{4}$ to $\frac{1}{2}$ an ounce), Seidlitz powders, cream of tartar (1 to 3 drachms).

(4) *Cholagogues* especially stimulate the liver and move the bowels:—Blue pill, calomel, podophyllin. (Require a medical man's prescription.)

(5) *Drastic purgatives* cause a violent and very watery action of the bowels. They are required in cases of drunkenness, dropsy (unless the heart is feeble):—Colocynth, jalap (compound jalap powder, 1 drachm), croton oil (dose, 1 to 3 drops, given rolled up in a bread pill).

A few additional purgative medicines for special cases are now given:—(1) For habitual costiveness and "wind in the stomach":—Sulphate of sodium, 2 drachms; dilute sulphuric acid, 1 drachm; compound infusion of gentian, to 6 ounces. (Take a small wineglassful of this mixture after the two principal meals every day.) (2) As a purgative for persons with rheumatic gout:—Sulphate of soda, $1\frac{1}{2}$ ounces; flowers of sulphur, 2 ounces; (One teaspoonful in a tumbler of milk on rising from bed every morning). (3) For anæmic women, with headaches, costiveness, and stoppage of the monthly flow:—Granulated

sulphate of iron, 2 grains; pill of aloes and myrrh, 3 grains. (To make one pill. Let the patient take one such pill thrice daily, after meals.) (4) To relieve the fullness of dropsy:—Podophyllin resin, 6 grains; ginger powder, 20 grains; extract of hyoscyamus, 24 grains. (Divide the mass into 12 pills, and let the patient take 2 every other night, at bedtime.) (5) A laxative for *children* with costive bowels. A stock of this medicine to be kept in cupboard at home:—Rhubarb powder, 45 grains; magnesium carbonate, 3 drachms; dill water, 4½ fluid ounces. (Mix well and give the infant a teaspoonful every two hours until the bowels are freely moved.) (6) Another purge for persons with dropsy in any part of the body:—Elaterium, 1 grain; extract of gentian, 12 grains. (For four pills. Let the patient take one every night.)

Quinsy.—This means the abscess which forms in the back of the throat sometimes as a result of inflammation of the tonsils. It ought to be opened by the surgeon; if left to itself, it will burst in time, but it may burst during sleep and suffocate the patient. It ought not to be left untreated. (*See also* “Sore-Throat.”)

Rashes on the Skin, Artificial.—These eruptions are those which are not due to some internal disease, such as scarlet fever, but which are mostly caused by some substance applied to the skin. Soldiers and sailors, and others, such as professional beggars and tramps, sometimes make themselves ill in this way in order to escape service or duty, or to prey upon the sympathy and charity of the kind-hearted. These sham eruptions come under two main headings:—

A.—(1) *Eruptions caused by external agents.* (a) Animals—such as lice, fleas, bugs, jellyfish, gnats, mosquitoes, wasps, and the irritating discharge of ulcers, carbuncles, and the urine in diabetes. (b) Vegetable—such as germs of some kinds, orange-peel juice, arnica, poison-oak, poison-ivy, mustard. Most of these produce a rash like that of eczema.

(2) *Trade eruptions*, among those who handle paraffin, tar, sugar (grocer's itch), salt, lime, cotton oil, etc., and such people as chemists, dyers, tanners, paperhangers, bakers.

(3) *The eruptions of beggars and tramps* are often produced purposely by the patients themselves to excite pity.

The chief offenders are hysterical girls, who cannot get as much attention paid to them as they desire; prisoners; deserting soldiers and sailors; and lunatics. The substances used are such as croton oil, acids, turpentine, iodine, mustard, Spanish fly, urine. A few of these malingerers are very clever, but not quite clever enough to deceive a doctor for very long, because they produce rashes which are not seen in disease, and suggest "art" rather than "nature." In the French army the soldiers use thapsia root, and sometimes get erysipelas from it. Rogues of this kind will often inflict much pain on themselves.

B.—The other type of artificial eruptions is produced by drugs taken internally. The rash caused by too much *antipyrin*, for example, is often like that of a certain disease, but there are generally ways of distinguishing it, and doctors are generally on the alert for these drug rashes. *Bromides* (given for sleeplessness or epilepsy) produce an artificial eruption (in some people) like *acne*. So may *iodides*, *arsenic*, *chloral*, *mercury*, *belladonna*, *quinine*, *opium* and others.

RASHES ON THE SKIN.—(1) A rash coming out in crops, first on chest, stomach and neck, then on wrists and the rest of the limbs, and accompanied by a sore throat and feverishness which has lasted one day only, is likely to be the rash of *scarlet fever* (scarlatina). Send for the doctor at once.

(2) A rash appearing at the beginning of an illness or without any feeling of illness, coming out in crops, on the face, shoulders, back, and scalp, with tiny red pimples which very soon become blebs—is probably *chicken-pox*. Send for the doctor at once.

(3) A rash, first seen on the face, of hard red pimples which feel like shot embedded in the skin, and accompanied by pain in the bottom of the back, and fever and headache and vomiting of three days' duration—is the rash of *smallpox*. Send for the doctor at once, or go to the nearest vaccination station and get vaccinated.

(4) A rash of red patches with round scooped-out edges, which appears on the fourth day of illness, and is seen first on the face, then on the body, and then on the limbs, and is accompanied by the signs of a bad cold in the head, cough and feverishness—is the rash of *measles*. Send for

the doctor and see that no other children go anywhere near the diseased one.

(5) The rash of German measles is variable.

(6) Small red spots with deep-purple points in the center of them are generally due to *flea bites*. Old flea bites might be mistaken for a skin disease, but marks on the linen and clothes will perhaps show what the spots are caused by.

(7) Wheals on the skin with whitish middle parts and a central blueish spot, are caused by *bug bites*. Bugs inject a poison into the skin which makes it swell so that the bug may have a better supply of blood to feed upon. Toilet vinegar and lead lotion are both good for bug bites.

(8) *See* also "Lice."

(9) Sometimes a patient taking medicine by the doctor's orders gets a skin eruption or rash, which ought to be reported at once to the doctor. Some people are too susceptible to some medicines and the dose will require to be regulated by him.

The commoner medicines which sometimes cause rashes are ether, bromides, iodides, chloral, quinine, antipyrin and belladonna.

(10) A rash of tiny blebs like drops of dew on the skin is probably a rash due to too much perspiration. It should be dusted with violet powder or fuller's earth.

(11) A rash which consists of wheals, flattened, and feeling hard and firm; at first red, then white and bloodless with a bright pink edge; and surrounded by a red halo—is the rash of *nettlerash*. In bad cases the whole skin is red and the wheals stand out in white patches upon it.

It comes on quite suddenly and itches and burns, but wherever the scratching is done fresh wheals appear. (*See* "Nettlerash.")

(12) Rashes may be caused by various irritants, such as the stings of wasps, jellyfish, and stinging nettles; of gnats and mosquitoes, and of hairy caterpillars. (*See* "Rashes, Artificial.")

Red Gum.—This is a skin disease, seen only in babies, and is associated with the cutting of the first teeth. It is shown by pink pimples on the skin of face, body or limbs, sometimes in patches, at other times in single pimples. They do not last many days, often come and

go, and do not ulcerate; they may alternate with a looseness of the bowels. Pay strict attention to diet, and avoid all chills to the skin. Give a dose of rhubarb and soda, in amount according to the age of the infant, and smear a little zinc ointment over the spots.

Refuse Disposal.—Refuse may be divided into three chief classes—house sweepings and ashes; garbage; and sewage (see “Sewage Disposal”). The substances composing these three classes should be disposed of separately.

Ashes may be disposed of by the producer in the country for paths, roads or filling-in, or they may be collected by municipal or town authorities to be disposed of as they see fit.

Garbage should be collected in covered galvanized cans which are emptied frequently (daily).

In the country garbage may be consumed by pigs, or dumped on a garbage heap, which is disposed of at longer intervals. Both garbage heap and pigpen should be screened to prevent the access of flies, which find garbage an ideal breeding ground.

The most sanitary method of garbage disposal for both city and country is by the use of garbage destroyers or incinerators. Small ones are now manufactured which can be placed in kitchens, and garbage can thus be destroyed as soon as it collects.

Garbage and refuse are collected in settled districts by the municipalities or towns and are then best disposed of by garbage crematories, furnaces or destructors.

Rheumatism.—This disease occurs in several forms. The most serious cases are those of acute rheumatism, also called rheumatic fever (see “Acute”). Chronic rheumatism may be left behind in the joints when the acute form passes off, and the same name is also given to a similar affection of the muscles. Rheumatism of the loins is commonly called *lumbago*, and when the pain goes down the back of the thigh it is called *sciatica*. It may here be remarked that all these terms are very inaccurately and carelessly used. As a fact the pains in these cases are very little understood even by doctors themselves. Hence much difference of opinion. The muscles of the shoulders, ribs and arms may also suffer. There is also a form of this disease called rheumatic arthritis, in which the toes and fingers become swollen, painful, and gradually so deformed

until they are useless. The chronic forms of rheumatism are associated with great pain, but an absence of fever.

Rheumatic fever is a formidable disease, lasting sometimes for weeks. In it there are severe pains in several of the large joints, high fever, great weakness, and an extreme liability to have inflammation attacking the valves inside the heart. It has been supposed that the disease depends on the formation of a peculiar chemical compound called lactic acid in the blood, and that this acid attacks the fibrous structures of the joints, causing them to inflame, swell, and contain an excess of watery fluid. For a long period it has been supposed that the immediate and only cause of attacks were chills, exposure to cold and damp, when the person is in a weak or unhealthy state. But more recent arguments and researches seem to show that rheumatism is, like most others, a germ disease.

The symptoms are shivering, malaise, nausea, and headache, with restlessness, passing on into a state of fever; next day there is an onset of painful stiffness in one or more joints, often the knees or elbows, the hips or the wrists; the fingers and toes rarely suffer. The patient feeling great heat, with violent pain, is soon rendered a pitiable spectacle of helpless suffering. He dare not move, because each movement increases the pain, which becomes agonizing, even the weight of the bedclothes can hardly be borne, the skin becomes bathed in sweat of a peculiarly offensive, sour smell; the pulse is full and bounding; there may be constipation or diarrhea, the tongue is furred, and the water is scanty and high-colored; the disease passes from one joint to another, and relapses are common.

Treatment.—Absolute rest in bed is necessary, lying between blankets on a hard hair mattress with the affected joints wrapped in wool, or covered with warm fomentations. The most reliable modes of treatment are by the salicylate of soda, aspirin, salicin, bicarbonate of potash, and similar medicines.

The three different types of the medicinal treatment of an acutely inflamed rheumatic joint (whether the case is severe enough to call “rheumatic fever” or not) are:—(1) The salicylate treatment, (2) the opium and salicylate treatment, (3) the alkaline treatment. The first is the best, generally speaking, though some patients *cannot take* enough salicylates, because of the humming noises they pro-

duce in the head. It is certain that this medicine relieves the pain in the joints, whether it cuts short the attack or not. We give below two useful prescriptions:—Salicylate of soda, 3 drachms; syrup of ginger, 1 ounce; water, 6 ounces. A tablespoonful to be taken every three hours while the joints are hot and painful (for an adult). Tincture of opium, 1 ounce; potassium carbonate, $\frac{1}{2}$ ounce; glycerin, 2 ounces; water, 12 ounces. To make a lotion; to be applied on lint to the painful joint. (*Poison*—not to be taken.)

Diet in Acute Rheumatism.—

FORBIDDEN ARTICLES OF FOOD.—Beef tea, meat extracts, pastry, sweets, sugar in all forms, alcoholic drinks of every kind.

ALLOWED.—While the joints are red and tender and there is inflammation—milk, milk and soda, peptonized milk; fruit jellies, oatmeal gruel, barley water, home-made lemonade, weak tea, malt extract.

When the fever has abated—light clear soups and broths, vegetables, chicken, light puddings, bread and milk, arrowroot.

After a fortnight without fever—Bread and butter, eggs, white fish, chicken, pounded lean beef or mutton or veal, stewed celery, spinach, potatoes, seakale, asparagus, grapes.

Rheumatism, Chronic.—Rheumatism in its chronic forms and stages manifests itself in numerous ways; it is an ailment that varies perhaps more than any other, both in the parts affected and the severity of the pains. (*See "Acute."*)

The disease may appear as lumbago, or pain, with stiffness, may affect the neck, or any one of the joints; or it may specially attack muscles, such as those between the ribs, or over the shoulder, or the scalp of the head.

All these forms of rheumatism are worst in cold weather, especially after exposure to wet and cold combined; they are also often related to certain forms of indigestion, and in most rheumatic persons they can be brought on by indulgence in beer.

Every attack which occurs renders the sufferer more liable to further attacks, and many persons suffer from rheumatism every few weeks from middle life to old age.

Repeated attacks are liable to lead to further changes,

for the muscles may waste and lose power, and the bones of the joints may grow out—that is, become enlarged and deformed.

All rheumatic patients should pay great attention to three points—diet, warmth, and excretions (i. e., bowels and urine) and perspiration. By these means attacks may be seldom felt, while errors as to these points may lead to much suffering at any time. It is wise to take a saline purgative, such as a mixture of sulphate of magnesia with bicarbonate of potash, in water, more or less regularly, without waiting for symptoms of illness. The skin also should be kept thoroughly and frequently cleansed with warm baths. The action of the kidneys should be sustained by an occasional dose of weak warm gin and water at bedtime.

Chills must be avoided by wearing woolen clothing, thick socks, and by the removal of wet boots at the earliest possible moment.

The diet should be very simple, with only a small quantity of meat; salted dry meats are especially to be avoided. Very little sugar should be taken. All starchy foods are likely to be harmless, as is milk, and also eggs, so that a very excellent diet consists of boiled and baked puddings of arrowfat, maizena, sago, tapioca, and macaroni, made with good cow's milk and eggs. All cooked vegetables will help to maintain the purity of the blood, and many varieties of fruit, such as oranges, lemons, bananas, pomegranates, cooked apples, and prunes, may be taken with advantage.

As already said, beer almost always does harm, while the French and German light wines, being of an acid nature, are unsuitable. The safest drinks are soda or potash water, to which a little malt whisky or good brandy may be added, and these should be taken only with meals.

Medicines.—(1) Powdered guaiacum resin, 1 drachm; potassium iodide, 1 drachm; tincture of colchicum seeds, 3 drachms; syrup, 2 ounces; cinnamon water to 6 ounces. A dessertspoonful of this mixture to be taken twice a day. An excellent medicine for old chronic rheumatism of the large joints. (2) Veratrine, 1 drachm; protoiodide of mercury, 1 drachm; vaselin, 1 ounce; an ointment to be gently rubbed into the joints. (3) Guaiacum powder, 1½ drachm; capsicum powder, 15 grains; pill aloes et asa-

foetida, $1\frac{1}{2}$ drachm. Divide mass into 60 pills. Take one three times a day, if preferred to liquid medicine.

Rheumatic Gout (Rheumatic Arthritis).—This is a name applied to many cases of chronic, painful joint disease, which differ from gout as much as from simple rheumatism. Rheumatic gout affects persons of middle age, or old people, and is not seen in children. It is essentially a chronic disease, and it tends to grow gradually worse and worse, to last for years, and until death occurs from some other disease. Both sexes suffer about equally. It is essentially a disease of the joints, and it is not related to rheumatism of the muscles so common in old age. Its onset is generally slow and gradual, but in some cases there are occasional feverish attacks. A man or woman begins to feel unwell and weaker than before, easily fatigued, loses appetite, and has vague pains in the head, back, and limbs. The digestion is disordered, and the bowels are irregular, and the urine often high-colored; the sufferer is restless, uneasy, and sleeps badly. Soon afterwards some of the joints become affected; pain is present more or less continuously, and the joints are puffy and enlarged, but not hot and burning with acute inflammation. The joints are stiff, and can only be moved with some difficulty and increase of pain; and so if the hip, knee, or ankle is affected, the patient is rendered lame. In some cases a peculiar sort of crackling or creaking noise can be made by handling and rubbing the joint, which, nevertheless, often seems to contain too great a supply of oil within it. One joint becomes affected after another, and this is often seen in the several joints of the fingers and thumb. After causing mild suffering for months or years, the joints become really enlarged with hard, bony outgrowths, and the gristle part of the joint becomes destroyed. In this way a joint becomes too large, too hard, deformed and useless. Following this destruction of the tissues forming the joint, the nerves of the parts around become irritated, which gives rise to spasms and cramps of the affected limb. All these troubles leading to weary days and disturbed nights, break down the general health gradually, and the patient becomes melancholy, and, on account of the debility, always feels chilled and depressed; he catches cold easily, and so often suffers from bronchitis; and such cases often end with conges-

tion of the lungs. This is a very intractable disorder, for while gout is more or less controlled by colchicum and iodide of potassium, and rheumatism by the salicylate of soda and bicarbonate of potash, this form of disease is not checked by any drug known to medical science, and the only hope of cure lies in the possibility of building up the constitution with fresh air, change of climate, regular exercise, with carefully-arranged diet.

Rickets.—This is a disease which affects children, and may be observed soon after birth, or not until the child is several years of age. It is a form of weakness caused by unsuitable and insufficient food, and the tendency to it may be inherited from one or both parents who were affected by rickets in their childhood, or it may be the result of birth from parents who were delicate in health from overwork or from scanty food at the time of the infant's development and suckling.

Poverty of the suckling mother is the most certain cause, as this is generally associated with unhealthy homes, and often with overwork. It is most apt to occur in the latter children of a family when the mother has had too many children for her strength, or has had children too fast, especially when the means of the father have not improved with the passing years.

There can be no doubt that children with congenital *syphilis* often develop rickets (see "*Syphilis*"). Sometimes it has seemed that a lack of lime salts in the food has caused the onset of rickets, and so the cod-liver-oil emulsion and the hypophosphite of lime mixtures sold by chemists often do good. But not every case is cured by lime salts. There is hardly a tissue in the body which is not affected in the disease called rickets.

The *bones* are soft and bendable, because they are wanting in lime salts, and they do not develop in the usual way. The chest of a rickety child is badly shaped, and perhaps "pigeon-breasted." The ends of the ribs in front are enlarged and feel like knobs under the skin. The elbows, wrists, knees and ankles are too large and knobby, and the legs get bow-legged because they are too weak to bear the child's weight. The spine sometimes gives way under the child's weight and may be bent forwards or sideways. The skull is too big and bulgy, and so the face looks too small; and the two soft places that you always

find on a child's head, and which generally "close up" in a few months still remain "open" beneath the skin, and soft for a year or two. A rickety baby often grows into a deformed child, and dies of rheumatism, St. Vitus' Dance, or some similar disease before reaching adult age. The bony girdle at the hips may grow much out of shape and give much trouble, if the child is a girl, when the time comes for her to give birth to a baby.

The *blood* is poor in quality in rickets. The *spleen* and *liver* are often too big. The results of the disease of the tissues are to produce tenderness of the body of the child, so that it cries when it is played with or rubbed. It throws off the bedclothes at night. Its head is hot and perspiring. Its stools (or motions) are green, pasty, watery, and smell very badly. The child is very liable to spasms, fits, convulsions, squinting.

No case of disease deserves more careful treatment, but it is almost useless to lay down a routine of treatment, as cases vary so much. The efforts of the child's parents must be directed towards the improvement of the general health, by fresh air, sunlight, and a life in the country, or by the seaside. Plenty of milk, cream, and eggs are wanted, and plenty of fresh fruit and vegetables. The most useful medicines are cod-liver oil, saccharated solution of lime, phosphates, quinine, iron, iodide of iron, and so on.

Ringworm.—(See "Skin Diseases" V.)

Rupture.—(See "Hernia.")

Salisbury Treatment, The.—This is a system of treatment chiefly useful for persons who are much too fat and who are at the same time *not in any way gouty*. Gout and Bright's disease must not be treated by this system. The Salisbury method is to feed the patient on an entirely meat diet, giving him about three pounds of lean beef every day and almost nothing else except plenty of hot water to drink. After one week of treatment the patient goes back to his ordinary diet for a time. The scientific value of this method, according to the inventor of it, is that it gets rid of all "fermentative" foods and that the large quantity of hot water drunk acts beneficially by carrying away the excess of uric acid which there is sure to be in such a purely animal diet, and forces the kidneys, skin and bowels to act most freely. The plan of treatment is here given in case any of our readers would like to try

this method at home. Persons with chronic indigestion, dry red pointed tongue, and pain after food will very likely derive benefit from the Salisbury method. Very fat people may give it a trial too. Clearly understand that the Salisbury diet is *not* intended as a permanent diet. It is to be continued "only while the necessity for it lasts."

The *Salisbury dietary* is as follows:—

(1) There are to be three meals a day.

(2) An hour and a half before each meal the patient is to drink one pint of hot water about 100° F. or a little hotter. It is to be sipped slowly. It may be flavored with lemon juice, or a little tea or salt, according to taste.

(3) Mealtimes are to be 8 A. M., 1 P. M., and 6.30 P. M.

(4) The *minced beef* may be flavored with pepper, or mustard, or Chutney, and the only vegetables allowed are lettuce, watercress and celery (raw or cooked). The *least* amount of mince taken with each meal is to be two ounces, and the largest amount allowed at any one meal is 16 ounces (one pound). If the patient is still hungry then, he must take the *whites* of one or two eggs lightly poached, between meals. He must not exceed six eggs a day. The feeling of weakness that this diet produces for a day or two will pass off.

(5) A little aperient medicine, such as *cascara*, may be necessary occasionally.

(6) If after a long course of treatment the patient is sick of beef-mince and beef cakes, he may have (minced before being cooked) mutton, lamb, poultry, well-boiled rice or macaroni, as additional food, but these are not to replace the beef altogether.

(7) *Instructions for making beef-mince*.—Cut slices from the top side of a round of beef. Cut the meat into strips and scrape away all fat and gristle. Put the meat twice through the mincing-machine. *Beat up* the pulp in a roomy saucepan with cold water, in the proportion of one teaspoonful of water to one ounce of pulp. Add black pepper and salt to taste.

Cook the mince *slowly*, stirring *all the time*, until the red color disappears. This will take about twenty minutes.

When finished, the mince should be a smooth, soft, pasty mass, without any lumps in it, and is to be served

in a hot basin and eaten from a teaspoon. The patient may have a stick or two of raw celery if he wants something to chew with it.

(8) *Instructions for making Salisbury beef cakes.*—Take minced beef pulp prepared as already described above, season it to taste, and turn it with two forks into several flat round cakes, about half an inch thick, and grill them over a clear moderate fire for about six minutes each.

Scarlet Fever (Scarlatina).—This serious disease, to which all are liable, though young children are most often attacked, is a contagious fever, of which the most important characters are sore throat and a bright red rash on the skin; and the most important complication is inflammation of the kidneys. (*See also "Infection."*) The poison of it clings to clothing and articles that have been used for the sick, sometimes for months, and often lying harmless for a long time may suddenly start the disease again if it finds a person who is weakly or susceptible.

As a rule, a person who has "caught" scarlet fever falls ill within two days. He shivers, vomits, and complains of headache and backache, and cannot eat or sleep. Then comes a bad sore throat. On the second day appears a red rash (*see "Rashes on the Skin," No. 1*). This rash begins to fade about the sixth day of illness, and then begins "peeling." The skin shreds off in tiny flakes, or even in large flakes, and these little scales are very contagious. This goes on sometimes for six weeks or more. As to the throat, it is red, swollen, and painful and tender. The tongue is bright red. The fever is high. In most cases the disease is at its height about the sixth day of illness, and after that the patient slowly gets better. In fatal cases the patient dies from exhaustion after about five days of severe illness.

The *complications* of scarlet fever may be terrible. The tonsils and the palate may ulcerate; the glands under the jaw may enlarge into a brawny hard swelling and undergo mortification. This generally kills the patient. The middle ear (*see "Ear Diseases"*) may become attacked, and the patient will probably then be deaf and have a discharge from the ears for the rest of his life. But the most serious of all are *inflammation of the kidneys*—which may

come on during convalescence and lead to dropsy, etc.,—and *scarlatinal rheumatism*, which may leave the patient with heart disease.

Treatment.—The general measures to be taken as to isolation are described under the treatment of measles (which see). A sheet dipped in and kept always wet with 1 in 100 carbolic acid lotion must be hung up to cut off the sick room from the rest of the house. From the very first it is a good plan to anoint the patient's body daily with 1 in 50 carbolic oil. Washing the body daily with weak disinfectant lotions is only to be done during convalescence. The medicines must, of course, be left to the doctor in attendance. A throat spray should always be used; it lessens the risk of ear complications. Such a spray is the following:—Glycerin of carbolic acid, 3 drachms; glycerin of borax, 3 drachms; rose water to half-a-pint. Isolation must be kept up for at least six weeks. It is of the very highest importance to guard against chills during the convalescence.

Sciatica.—This word means neuralgia (nerve pain) or actual neuritis (nerve inflammation) of the sciatic nerve, which lies under the muscles at the back of the thigh from the buttocks to the heel. It is generally caused, in the first place, by exposure to wet and cold, as by sitting on cold stone, or lying on wet grass; and, once contracted, sciatica is often very difficult to get rid of. Persons with sciatica have pain more or less along the whole length of the nerve, even down into the heel, and *tender spots* at various points on the back of the thigh. If it goes on for a long time, there is generally some wasting of the muscles and flesh of the thigh.

Occasionally, sciatica is a sign of some spinal disease.

Acute sciatica, coming on suddenly after some indiscretion, like sitting on a cold stone, should be treated thus:—Get the sufferer to bed, wrap him up warmly, and give him two or three grains of calomel, followed by two Seidlitz powders next morning. About the same time as the dose of calomel, let him take 15 grains of Dover's powder. (This is a pharmacopœial, and not a patent medicine.)

Very *chronic sciatica* ought to be treated by a long rest in bed and dry cupping over the course of the nerve, along the thigh. Both acute and chronic sciatica will need special medicines for the relief of pain, and morphine or cocaine may have to be injected under the skin; of course,

these drugs can only be safely administered by a doctor. Moreover, in most cases of sciatica, the patient is already tainted with gout, or rheumatism, or alcoholism, or syphilis, and the treatment proper to these diseases must also be administered. Sufferers from sciatica might like to try one of the following formulas:—

- (1) Phenacetin, 50 grains; salol, 50 grains; caffeine, 5 grains. Divide into 10 cachets, and take from two to four cachets daily, in recent case of sciatica; or
- (2) Spirit of turpentine, $\frac{1}{2}$ ounce; pure honey, $1\frac{1}{2}$ ounce. Make a confection, and take a teaspoonful night and morning; or
- (3) Salophen, 10 to 40 grains, in cachets. Three or more cachets to be taken daily in cases of sciatica in rheumatic person. Aspirin has also had its advocates in 10 grain doses, thrice daily.
- (4) Several liniments are in common use, but let the sufferer remember that most cases of sciatica are neuritis and not neuralgia alone. Hence the relief obtained by rubbing liniments in is only temporary. Good liniments for this purpose are chloroform, belladonna, aconite of turpentine or camphor liniments.
- (5) Many cases of sciatica get relief from the injection under the skin of pure water; others like injections of cocaine; others of chloroform.
- (6) Leeches put on over the painful spot often give much relief.
- (7) Great heat, locally applied, as in the Sprague system, often cures the neuritis altogether.
- (8) Alcohol, one of the chief causes of neuritis, does harm in all cases, and ought never to be taken.

Scrofula.—A child or person is said to be *scrofulous* when he or she suffers from a special liability to diseases caused by the germ of tuberculosis or consumption—"the tubercle bacillus." The word is dropping out of use nowadays. There used to be an idea that there were only two types of body which were especially liable to be attacked by tubercle. But it is quite certain that there is *no* type of individual which *cannot* become infected, though some types are still recognized as being more prone than others

to the disease. The two "scrofulous" types are—(1) Those persons with coarse hair, coarse features and greasy skins, of poor muscular development and long, flat chests, and (2) those of somewhat delicate beauty, with pink and white delicate skins, large eyes, soft dimpled flesh, downy hair over the face, neck and arms, keen perceptions, lovable dispositions, and bright intellect. The word *struma* means much the same as *scrofula*. Old country doctors still sometimes call only tuberculous disease of the lungs "consumption"; tuberculous disease of a joint "scrofulous joint"; and tuberculous infection of the glands "strumous glands"; although as a fact the disease is the same in all these cases—caused by a deposit of "tuberculous matter" in the part affected. (See "Tubercle.")

Scurf.—This is a very different thing from scurvy, which is a blood disease. Scurf is a disorder of the skin of the head and hairy scalp. There are two chief varieties of scurf—(1) a greasy, oily scurfiness of the skin, with flakes of reddish-brown scurf skin and red blotches, which may spread from the scalp down on to the face; and (2) a dryness of the scalp, with itching, and dry scales, which accumulate on the collar of the coat during the day, and fall in a shower when the hair is brushed. The first variety is generally called *scurf*, and the second is named *dandruff*. In the one case the skin glands are too active and too much oil is made, so that the skin becomes sodden and sticky, and in dandruff the hair, eyebrows, mustache and beard get thin because there is not oil enough in the scalp. In both cases the hair glands are in fault. Constipated persons seem to be very liable to scurf on the head. Seeing that people of all ages and of all classes, and of every way of life, and under the most various circumstances of health and quality of skin, suffer from scurf, we are sure to be pretty right if we conclude that scurfiness is caused by the presence of some parasite or other. But although animalculæ of many different varieties have been found in the scales from scurfy heads, no one can be sure yet what particular organism does the mischief. The importance of all this to a non-medical reader is this—that no one ought to wear the cap or hat, or use the hair brushes or combs of another person, and that brushes and combs ought to be washed in disinfectants as well as with soap. In the household of the intelligent woman of the present day, disin-

fectant solutions ought to be frequently in use for the prevention of disease; for prevention is better than cure. As to what disinfectant to use, one may employ Sanitas Fluid or boric acid, or boroglyceride, or carbolic acid, or corrosive sublimate. The last two are very powerful, and they are also poisonous. But little bottles of tablets may easily be obtained, and lotions of various strengths (according to the purpose required, and prepared from the instructions on the labels), may be made in a few minutes.

There is no doubt but that scurfiness prepares the way for eczema in some persons and that it is sometimes difficult to decide where scurf leaves off and eczema begins. All the more reason for keeping brushes and combs clean and disinfected, and for not using other people's clothes and for frequent washing of the scalp.

Now scurf is a local disease, and does not require "medicines for the blood." The scaly masses ought to be got away by gentle rubbing with a clean rag, dipped in spirit. Then, at bedtime, in the case of *dandruff*, or *dry scurf*, rub into the scalp (NOT the hair, but the skin) an ointment made of precipitated sulphur, 1 part in 10 parts of cold cream. Another good pomade is made of 5 grains of precipitated sulphur to an ounce of lanolin.

In the other cases of scurf, where there is already too much oiliness, first remove all greasy crusts and scabs and scales, but gently, and without one of those abominable little fine-tooth combs, which injure the skin and do harm. Wash the scalp daily with *Spiritus alkalinus saponis* in warm water for a week or so. Then when the scurfiness is less, wash only once a week, and then use a new lotion made of 20 grains of corrosive sublimate in 6 ounces of spirit and 2 pints of water. This is a poisonous preparation, and it must be labeled poison and not left about. And, at last, when there is no more scurf, to promote the growth of the hair, use the following elegant pomade whenever necessary:—Precipitated sulphur, 2 drachms; castor oil, 4 drachms; tincture of cantharides, 1 fluid drachm; balsam of Peru, 10 drops or more; cocoanut oil, 3 drachms. This will be found a delightful preparation and may be continued throughout life. (For other methods of treating Scurf, see "Skin Diseases" IV.)

Scurvy.—This is a blood disease caused by the absence of sufficient vegetables in the diet. It is not to be confounded

with scurfiness or *scurf*, which is merely an unhealthy condition of the scalp of the head. The *signs* of scurvy are—weakness of gradual onset, sallowness, sunken eyes, pains all over the body, tenderness of the gums, and foul breath. Later, the gums bleed, the teeth fall out and bleeding takes place from nose, rectum or vagina and even under the skin (bruises) and in the whites of the eyes. The disease may cause death at last.

Treatment.—Scurvy can always be avoided by a sufficient supply of fresh vegetables or fresh meat; and the same remedy will cure all but the very worst cases.

Seasickness.—There are some people who, expecting to be seasick when they go down to the quay, generally manage to feel so before they actually go on board by merely watching the ship riding at her anchor. Others, expecting to be sick, spoil the whole pleasure and interest by mere apprehension. Some require no more than the gentle plunging of a vessel at anchor; some need a thorough shaking-up in order to produce retching. As soon as a susceptible patient gets on board a ship he should lie down flat on his back and keep his eyes closed, and try to get a nap. But, then, the susceptible man or woman ought never to attempt a sea voyage without preparing themselves. The nervous system of such a person requires soothing for a few days before embarkation. Twenty grains of bromide of sodium ought to be taken thrice daily for four days before going on board. A light meal must then be taken three hours before the ship starts. Some people only want a little courage to help them fight against seasickness, and iced champagne may very often supply the stimulus required to make Dutch courage. Chlorobrom is one of the favorite remedies. It contains bromide of potash and other things, and should be taken in the same way. Some people like to suck extra strong peppermints all the time, and there is no objection to them if the people near at hand do not object. Before going on board attend well to the general health. Eat nothing in the least bit indigestible, such as pickles, cheese, nuts, rich soups, highly seasoned dishes, and such-like. And, above all things, keep the bowels freely open.

Self-Doctoring.—This is only mentioned to be condemned. No sensible man or woman will doctor himself or herself in anything more than a passing ailment. Even a doctor will

not doctor himself, because he knows how misleading sensations can be. If you are ill, send for the best doctor you can afford, and respect him, and put full faith in him. Tell him everything, carry out his full directions and work *with* him in every way. Even at the worst, his advice, founded on skill and experience, must be better than your unskilled guesswork; and this plan will be found to be more economical in the end.

Sewage Disposal.—There are few more common methods for the transmission of disease than the improper disposal of sewage. This comes about as a rule through the contamination, through sewage, of water and milk supplies, of baths, and of food supplies, largely through the agencies of flies. Diseases transmitted in such ways are typhoid and scarlet fever, cholera, diphtheria, tuberculosis, summer diarrheas, and many others, including those due to the intestinal parasites. One of the gravest and most familiar example of the last is the transmission of hook-worm through sewage-contaminated soil.

This is a foot or skin infection and is prevented by wearing shoes.

There are two main systems of sewage disposal—the wet and the dry systems. The wet system is only applicable where there is a plentiful water supply, as in cities, or towns and is therefore confined to thickly settled districts.

The methods most in use in the dry system are the *pail system*, the *earth closet* and the *privy vault*.

The last method is usually objectionable as the contained sewage is very liable to contaminate soil and water.

If used it should be lined with impervious material like concrete or brick and emptied every week or two. It should always be carefully screened from flies and the openings should have hinged coverings.

In the *pail* system a pail is used of about two cubic feet capacity.

These pails are removed as often as necessary—neighboring farmers being willing to remove them free of charge on account of the value of this material as fertilizer.

In the *earth-closet* system about a pound and a half of dry sifted loam or clay are immediately thrown upon the dejecta, which are thus rendered inodorous and inoffensive. Owing to the action of certain bacteria in the earth, all trace of the peculiar nature of the organic compound is

quickly destroyed, and the mixture soon becomes practically nothing but humus and is of some value as a fertilizer.

The closet should not be on ground higher than the house; it should be tightly closed in and the openings in the seat covered to keep out the flies. It should not be too far from the house (about 150 feet) and not nearer to a well than 200 feet. Lime should be freely used, or even better are wood ashes. Closets should be frequently cleaned and the matter in them (if not used for fertilizing purposes) completely buried or spread out on soil at some distance from the house so that it will dry quickly.

Horse manure is best handled by placing immediately in barrels which are covered or screened from flies (98 per cent. of which breed in horse manure).

In the wet system of sewage disposal the chief points of interest are the collection or plumbing and the disposal of the sewage material.

The essentials of good plumbing are:—

Enough water to flush and clean pipes.

A ventilation system to dilute and carry off gases.

Open plumbing—to facilitate examination and repairs.

Traps—to prevent entrance of sewer gas and micro-organisms into the dwelling.

The following are the commoner methods of sewage disposal, which concern not so much the householder as the engineer planning city works:—

Emptying into the sea at a distance from the shore.

Land irrigation, in which the sewage is distributed over farms for fertilizing purposes.

Purification by chemical precipitation with subsequent disposal of the sludge.

Biological purification by means of the septic tank or contact beds.

Filtration.—This is often combined with the previous method. The filtrate contains very few bacteria after the last three processes and may safely be emptied into a large stream.

To empty untreated sewage into a stream is criminal, as inhabitants on the banks lower down are certain to contract such diseases as typhoid fever, diphtheria or cholera if this water is drunk.

Cesspools, which are frequently used in the country to

temporarily collect and store large amounts of sewage, are dangerous unless properly built.

They should be at least 50 feet away from a dwelling and 60 to 80 feet distant from a well, spring or stream. Their walls and floors must be constructed of good brickwork in cement, rendered inside with cement, and with a backing of at least 9 inches of well-puddled clay around and beneath the brickwork. The top of the cesspools must be arched over and means of ventilation provided, which, at the same time, are carefully screened from flies and insects.

The best method of emptying cesspools is by the pneumatic pressure method such as is commonly used in Paris with the *fosse permanente*.

Simple Life, The.—The papers, a short while ago, were full of this expression: "Live the Simple Life!" What does it mean? "The Simple Life" is the title of a wonderful book by a German pastor named Wagner, in which he finds just fault with all the artificiality of our present empty civilization. He shows that most of the so-called comforts we enjoy are not necessities, but luxuries which we should be happier without. Who can doubt it? The arguments in this book chiefly hit the foolish expenses of a certain rich class; but the working man is not exempted, for does he not drink to the hurt and damage of his health and happiness, the emptying of his purse, and the impoverishment of his family? What would life be, with all its disappointments, without some of its convivial drinking, its smoking, its cups of tea?—the reader may ask. Well, as life is at present in our towns, and with the fearful competition, life would be dull indeed without some "dissipation," we are forced to admit. But, all the same, the Simple Life has its claims upon us. It does not mean that to be happy and well we ought to forego all alcohol, all tea, all tobacco, all gorgeous hats, smart boots and shoes, feathers and luxuries.

It only means that the man, woman, or child is happy and rich in proportion to the things he or she can do without! The more simply we live, the happier and healthier we shall be. The real Gospel of the Happy Life is to learn to do without. We do need pictures, and travel, and books, and clothes, and stimulants, in moderation. They help us to develop the best that is in us. But we can and ought to see pictures in the galleries, and they are better than most

of us can buy; we can spend our savings on bicycles and traveling tours; we can dress suitably to our stations, and for comfort rather than show; and we only need stimulants when we are not strong enough for the work we have to do. The Simple Life saves our pocket money, and increases our health and enjoyment. We are better citizens, better sons and daughters, better sweethearts, better married folk, better fathers and mothers, better old people, for having learned to do without what we really do not need. It is in the hands of women, to a great extent, to bring into effect the advantages to be gained by the simpler way of living. Let them scorn to keep company with the man who drinks to excess, and let them refuse to marry—as they are doing more and more—with men who are dissipated or selfish and luxurious. And they themselves may set a good example by dressing plainly, and discouraging extravagance. They are very anxious to please and be pleasing; so let the men, in their turn, discourage over-fine dressing, excessive tea-drinking, and encourage, as far as possible, the “Simple Life” in their families.

Sins against Health—Hygienic Misdemeanors.—Under these rather stern titles we refer to all those faults which people commit, knowingly or unknowingly, against their physical bodies or their minds. How is it that to-day there is a mighty host of doctors trying to grapple with a mass of disease and ill health; that there are hundreds of patent medicines, all guaranteed to cure; that there is an ever-increasing number of asylums for the unfortunate insane; and that every year the hospitals are crying out for funds, that they may enlarge the scope of their necessary labors? Is not medical science wonderfully advanced? Have we not sanitary boards, health officers, splendid sanitation, and isolation of infectious disease? How many families, reader, do you know of in which there is no one sick, no one ever ailing? Has nearly every family, then, a sick member? And this in America—the most advanced, civilized, and enlightened country in the wide world (according to the American)! The fact is, that we—advanced, wealthy, sensible, sturdy, plucky, enlightened and civilized, as we are—are living to-day an artificial, unwholesome, and wearing life; and it is the artificiality of our lives that prevents so many of us from enjoying the birthright of every living creature—sound health. As long as an indi-

vidual follows that inward voice which tells him what to do and what not to do, he remains healthy in body and mind. As soon as he begins to hear and do what others tell him to do, he begins to find life complex, and to ail something. A young man is led to suppose something manly in drinking and smoking; of himself, unless he be ill, he would never drink except when thirsty; and of himself he probably would never smoke. Why should he? He only smokes in imitation of his fellows. The young girl is told that to tight-lace, wear high heels, or otherwise deform herself is to excite admiration in men. Of herself she would probably prefer to breathe freely, and to live without adornment other than the roses of good health. Thus you see what we mean by a hygienic misdemeanor—it is really a sin against health. You must realize that Nature is pitiless and inevitable; that as you sow, so must you reap. Every excess must be followed by a reaction, a depression; every sin brings its own punishment, sooner or later—but sure as death. No one can escape this law. And, in the same way, it is possible to live righteously, from a hygienic point of view—to be moderate, temperate in eating, as well as in drinking, and the result is just as certain, just as inevitable. Years of drinking to excess, whether in the bar or in the privacy of your bedroom, with the bottle hidden beneath the mattress or up the chimney—will tell upon you, ruin your nerve, and spoil your health. And years of moderate living, of hard work, of early hours, and of exercise in fresh air, will have their due effect. Without accidents or excesses many a man and woman lives to a hale and hearty hundred. Why not you?

Skin Diseases.—I.—This is a subject which does not lend itself to easy comprehension by the non-medical person. More, perhaps, than in any other branch of medicine is it necessary to know the anatomy and physiology of the parts under consideration, and to have experience of hundreds of cases. We have, therefore, merely written a sketch of the subject here, while for a few only of the commonest skin diseases and their remedies, details are given under separate headings (which *see*).

Almost all persons have some form of skin disease at one time or another, and these affections often give rise to much discomfort and often to disfigurement. Some forms cause

great irritation, others are painful, and some give rise to unpleasant discharges.

It must be remembered that many skin ailments are contagious, especially those that are due to parasites or insects. Some are attended by fever, and these are acutely infectious, such as measles and scarlatina.

Some of these diseases are only observed in infancy, others in childhood, while others again are only seen in middle life or in aged persons.

Constitutional diseases of the nature of blood-poisoning are often shown to exist by skin eruptions. The diseases of the skin are shown by about nine different peculiarities of the surface; these may occur singly or may be observed grouped together. These forms are smooth reddened blushes, pimples, vesicles, blebs, pustules, wheals, stains, scalliness, or scabs.

For example, erysipelas is shown by a blush only, but smallpox goes through the stages of pimple, vesicle, pustule, and scab; while psoriasis is scaly only, as is one form of ringworm or tetter. The red blush is seen in measles or scarlatina. By pimple is meant a small, round, raised spot, somewhat hard and solid. A vesicle is a similar spot, which contains a drop of clear liquid. A pustule is a similar raised spot, containing a drop of pus, or matter—a thick yellow liquid. Blebs are large vesicles like a blister caused by a scald or burn. Wheals are temporary raised pink patches; they rarely last many hours; they are seen after nettle stings.

Scales of dry scurf are commonly seen on the scalp, but some skin diseases cause large patches of scaly soreness on the hands and arms. Stains of color, which are often hairy, are generally formed before birth, but some patches of yellow or brown color may be due to parasites in the skin, or some are caused by constitutional disease.

Scabs are the late stage of vesicles, blebs, and pustules, after they have been broken, and arise from the surface drying into a hardened crust; but when a scab is pulled off a raw sore place is found underneath.

Scabs being a dried, dead layer, it is not of the slightest use to apply any ointment or lotion to them; the scabs must be removed, and any curative treatment must be applied to the raw surface. Much disappointment is often

felt by a neglect of this precaution. To remove scabs it is often necessary to apply one or more poultices of bread, linseed meal, or mashed boiled turnip.

II.—*Chilblains, Cracks and Chaps*.—One of the most common forms of skin disease in the cold weather is the *chilblain*; this is caused by exposure to cold air, and is often due to imperfect drying of the hands after washing them; it also attacks the feet, and in some persons the ears suffer from exposure to cold winds. What are called *chaps* are also caused by cold. Persons afflicted with a weak constitution and a defective circulation of the blood suffer most often.

Chilblains commence with a red blush on the skin, which is very irritable, and becomes tender from rubbing. If they are not soon cured they are apt to become broken in small patches; that is to say, the inflamed surfaces become raw, and require to be treated as an ulcer with healing applications, such as zinc ointment. While unbroken they need to be protected from the air, and require stimulating liniments or spirituous paints, such as the tincture of iodine. An excellent application is made by mixing turpentine 12 parts, castor oil 6 parts, and collodion 30 parts; this is painted on the chilblains with a brush. Compound soap liniment or camphor liniment will cure many cases. A favorite old domestic remedy was to take an onion, cut it in half, dip it in salt, and rub the salted cut surface on the chilblains. None of these applications must be put on a broken chilblain. Inasmuch as this ailment shows a state of feeble health, it is always wise to give cod-liver oil for two or three weeks after meals and also to take a mixture of quinine and iron half an hour before the two principal meals each day.

Chaps and small *cracks* on the skin of the fingers may be well treated by collodion, or by the above-described collodion paint. *Chafes* are red patches of skin due to rubbing, and are also frequently found on the legs of infants, where they are set up by their being kept tied up in wet napkins, especially if they are not changed often enough. These can be avoided by frequent bathing with warm water and soap, and the parts carefully dried with a warm, soft towel. When they have occurred they must be carefully attended to in the same manner, and then dusted over with a mixture of dry oxide of zinc and starch powder. If

actual soreness has arisen, then apply zinc ointment twice a day, and put a layer of clean lint smoothly over the part. Fuller's earth is often applied by the poor to these tender, sore patches on infants, but it often does harm, because it is not ground sufficiently fine and smooth. Another excellent dusting powder is named oleate of zinc; it is extremely soft, and very soothing to inflamed skin.

III.—*Nettlerash, Freckles, Babies' Pimples, Erythema.*—The ailment called nettlerash is not uncommon; it is almost always due to indigestion set up by excess of food, or by unwholesome food, and attacks are particularly common after eating shellfish, crabs, lobsters, cockles, oysters, or periwinkles. Eating cold pickles with hot meat is another cause. A sudden chill on a perspiring skin may bring it on. Persons who have had one attack often have others subsequently. *Nettlerash* is a red blush, upon which a paler patch soon appears; it does not last many hours, but leads to much itching and irritation. Scratching and rubbing this part should be avoided, and the irritation can be subdued by lead lotion, zinc ointment, or by a lotion of equal parts of sanitas and water. Epsom salts, taken in water, is the best remedy for internal use.

Freckles are a form of skin disease, shown by small yellow or brown spots on the white skin of the face, arms and hands. Most persons object to them, but there are a few people who do not think them unbecoming. There are hundreds of advertised quack remedies for freckles, but we do not consider that there is any means of cure. They often come out after exposure to bright, hot sunlight, and may disappear of themselves. The cucumber ointment imported from Paris is, perhaps, the most likely means of cure. Or the following lotion may be tried:—Fresh lemon-juice, rose-water, rectified spirit—equal parts. (Mix.) Leave for 24 hours. Strain through muslin. Bathe the face night and morning with the lotion after washing, and dry lightly.

Red-gum and *white-gum* are the names of minute red or white pimples seen on the skin of infants; they appear after free perspiration under their clothing; they are not of much importance and do not last many days. A little laxative medicine may be given, and lead lotion or zinc ointment may be applied to the skin.

The group of pink, red, and purple skin rashes, which

are accompanied by fever—we refer to measles, scarlatina, and erysipelas—are serious diseases, and need medical care. There is one other which *may not* be of much importance; this is called *Erythema*. In this disease there may be no fever, and it is shown by the appearance of roundish pink patches on the white skin, and these are often seen on the front of the legs. They may be a little raised above the skin around them; they may become more dusky in color as they fade away; they last a few days. These patches are also seen on the face and chest. The treatment is by aperient medicines, such as sulphate of soda or sulphate of magnesia, citrate of magnesia, or the tartarated soda; rhubarb, with bicarbonate of soda, is suitable for children and infants. The diet for a few days must be light, consisting of broths and farinaceous puddings, and fruit; lemonade is the best drink to be taken. This skin rash is not contagious.

IV.—*Scalp Diseases*.—The skin of the head is a part which often gives rise to trouble. In health it should be pale, smooth, free from scurf, and not too greasy, and the hairs should stick firmly in it.

In disease it loses all these natural characters. The hair may fall out generally, or in patches, and leave baldness. There may be any variety of pimples, and pustules with scabs, and the scalp may become scurfy, with either dry scales or a matted greasiness. Some forms are acutely contagious; others cannot be caught by one persons from another.

Loss of the hair may be due to ill health, and may result from the violence of a fever, and the hair does become gradually thinner during consumption and chronic illnesses. In such cases, when recovery follows, the hair generally takes on new growth. Loss of hair early in life is very often an inherited peculiarity, and in such persons neither medicines nor local applications will effect a cure. When the loss of hair occurs in patches it becomes necessary to decide whether the baldness is due to the growth of a microscopic vegetable mold, or fungus, or to some fault in the nerves of the spot. To decide this a physician is necessary; he must scrape the surface, and examine the scurf under powerful glasses; if there is any mold growth, the treatment is by applications which kill such fungi; if not, the cure is by stimulating liniments and general tonics.

Scurfiness of the scalp is often a great annoyance; it generally comes on from neglect of regular washing of the scalp and brushing of the hair. Local treatment is necessary. The scalp must be thoroughly washed with warm water, with a nailbrush and a cake of 10 per cent. carbolic soap, which a chemist can supply. Do this every other night, three times. After this treatment, rub in every night the following lotion, with a piece of flannel:—Mix the yolk of a small, fresh egg with half an ounce of spirit of rosemary, and a half-pint of clean rain water. When the scurf is greasy, rub in this lotion instead:—Take one drachm each of powdered bicarbonate of soda, and borax, half an ounce of eau-de-cologne, one ounce of rectified spirit, and water half a pint; mix and bottle.

Until lately it was considered very good practice to rub pomatums, scented ointments, into the scalp almost daily, but of late years doctors have considered that this custom chokes up the pores of the skin, and does not nourish the hair. The present plan is to stimulate the growth of the hair by constant brushing of the hair and scalp.

V.—A note on *Ringworm*.—We come now to that most persistent and troublesome ailment which is commonly called tetter, or ringworm. It is a contagious disease, due to the growth of a minute vegetable mold or fungus on the skin, and in the roots of the hairs. It makes the hairs brittle, and they break off, and makes them loose, and they fall out. The disease may commence in one spot only, or in many patches, almost at once. It causes irritation, and so the sufferer scratches it, and so makes the skin red and inflamed, and he infects one place after another. Patches may begin anywhere among the hair on the scalp, or on the neck where there is only a fine down growing. There is a variety of ringworm which occurs on the skin of the face, neck, arms, or body where there is no hair; this also is parasitic, but it is much less troublesome and is generally easily cured by the ointment of ammoniated mercury. The difficulty with children is to prevent them scratching the spots, and so spreading the disease.

To return to ringworm of the scalp, if you see a patch of about a week old which has not been treated there will be a bare place, with a scurfy pink surface, the stumps of the hairs visible; a few hairs not yet lost will be found to be easily broken off by rubbing them; such a patch be-

comes red with scratching, and may soon be covered with vesicles and little scabs; ointments and paints which cause irritation will produce the same result. The patch may spread continuously, or other separate patches may appear, and any or all of them may spread, until almost all the hair of the head has been destroyed.

If a child be very healthy, and if the first patch be at once treated in a scientific manner, there may be a chance of cure in a month if there be no infection of other spots.

But in the majority of cases the disease spreads from its first center and may run a course of many months, and even years.

In order to effect a cure it is necessary to improve the general health, to keep the spots free from dried scabs, to apply paints or ointments which will kill the growth, and then, with zinc or lead ointments, to heal up the injured surfaces. The most difficult part is to find out when the disease is killed, and the powerful applications may be safely discontinued. If they are applied too long, they set up unnecessary inflammation, ulceration, and scabbing; if they are left off too soon, the work of killing the fungus growth has to be begun again. Skilled medical attention is necessary throughout the whole course of treatment. Amateur doctoring is practically useless. We give a few good prescriptions for those who care to try them.

(1) For ringworm of the body.—Ointment of the iodide of sulphur, $\frac{1}{4}$ drachm to 1 ounce of benzoated lard. (For delicate skins.)

(2) For ringworm of the body—(for farm laborers, etc.).—Ointment of the iodide of sulphur, 1 part; lard, 8 parts. (Should be made up a few days before required.)

(3) For scalp ringworm—delicate skins.—Oleate of mercury ointment, 10 per cent.

(4) Pomade for the heads of children in a school or home where ringworm has broken out.—Boric acid ointment, 2 ounces; eucalyptus ointment, 1 ounce; cocoanut oil, 2 ounces; oil of cloves, $\frac{1}{2}$ drachm.

(5) *Hutchinson's* plan.—Cut off all the hair and shave it close, where possible. Wash the scalp twice a week with a lotion made of tar water, 1 drachm; rain water, 1 pint; and rub in this ointment:—

Chrysarobin, 1 drachm; ammon. hyd. chlor., 25 grains; lanolin, 1 drachm; benzoated lard, 6 drachms; tar water, 10 drops.

The secret of success often lies in the patient continuance of the same remedy.

Sleep, Hints on Obtaining.—(1) Let the room be well-ventilated and cool.

(2) Let the feet be warm. Those who suffer from cold feet should first try holding them in a basin of *cold* water by the bedside, just before getting into bed, for about two minutes or less, and then rubbing them fairly dry with a rough towel. In persons with poor circulation, this plan may fail; then a hot-water bottle must be kept at the end of the bed. Anything rather than cold feet.

(3) If hot when coming to bed, sit undressed long enough to get moderately cool, and then get *quietly* into bed.

(4) Have nothing to eat or drink for at least two hours before bedtime.

(5) Once in bed, resolve to have done with thinking and calculating. Once the bad habit of reviewing the day's actions and events in bed is formed, it is very hard to break.

(6) Get a dark *blue* globe for a night light or electric light in the bedroom. Many persons can go to sleep better in blue light than in any other, or in darkness.

(7) Try drinking half a pint or more clean cold water on retiring. With some people this clears the blood, washes irritating food out of the stomach, and promotes a feeling of quietude which helps sleep.

(8) Brush the teeth, and wash out the mouth before retiring.

(9) The following method, suggested by Mr. Martyn Westcott, may prove as useful as it is interesting. "Lie on the back, in an attitude of complete muscular relaxation. Let the feet be warm or make them so with a hot-water bottle. Let the covering be of blankets only, and not too many either; it is the lower half of the body which especially needs to be kept warm at night. Now take a long slow breath, without great effort and without hurry. At the same time slowly and gradually open the eyes to the full extent. At the end of the long breath the eyes

ought to be widely open and the eyeballs looking upwards. During these breaths the mind must be concentrated on what you are doing; that is essential. Five such breaths are to be taken—leisurely, easily—and the opening and shutting of the eyes must keep time with them. Then take ten such breaths with the eyes closed. Then five more with the ‘eye accompaniment’; then ten more without it. Gradually you feel more and more sleepy, you lose count, you do the eye-opening at last only in imagination, and you drop off to sleep. A very little practice is required to perfect this method, which is really one of auto-suggestion.”

Sleeplessness.—It is during natural sleep that the waste and wear and tear of the mind and body are replaced and remedied. The brain it is which controls the whole organism, and it is the brain which knows when fatigue has arrived and when the various parts of the body have done as much work as they are fit for. It is the activity of the brain which requires rest and renewal, and if that activity is obliged to continue, if we are kept awake too long, the whole body suffers. Whereas, as soon as the activity of the brain ceases for a time during sleep, all the rest of the body is able to repair and renew itself. Thus we see the importance of sleep. When we dream it means that only part of the brain is asleep, and that is why dreamy sleep is so unrefreshing. That is the reason also why dreams are so unreasonable, so unhappy, or so absurd; only a small part of the brain is at work, and there is no control over the ideas as they dart in and out of the half-conscious mind.

Want of sleep for long periods is often the cause of madness; or in many cases it would be true to say that the cause of madness is also the cause of the sleeplessness, and that if we cannot relieve the latter the patient may go mad at last.

It follows that we should make sure of our due allowance of sleep, and a small allowance will do for many people; too much sleep makes one drowsy and dull-witted. We should never take sleeping draughts if there is any other way of dealing with the trouble. The principal causes of want of sleep are worry, grief, exciting passions, indigestion, heart disease, pain, cold feet, lack of nourishment.

We are often asked how much sleep should be taken.

But we cannot answer the question. Every person must find out for himself how much sleep he needs, and see that he gets it, even if it means curtailing hours of pleasure spent in dancing or amusement. "Six for a man," they say, "seven for a woman, and eight for a child." But most men want more than six hours.

Sleep is produced by withdrawing blood from the head. We mean, for instance, by putting hot-water bottles to the feet. Many people cannot sleep because their feet are cold and bloodless.

If you eat a hearty meal you will probably feel drowsy after it, and that is because the stomach requires all the blood it can get to help to deal with the food. You cannot do brain work after a hearty meal because of this, and if you attempt it you will get indigestion.

If you suffer from sleeplessness, then, the first thing to do is to see if you are transgressing any of the ordinary laws of health and hygiene. Attend to the ventilation of your bedroom; do not eat heavy suppers, with pickles and cheese; take enough exercise and try and put aside all business worries as soon as you enter the bedroom.

A hard bed is always better than a soft one; a spring mattress is the best of all for health; perfect quiet is not always desirable; some people cannot get off to sleep without a clock ticking in their neighborhood; but habit is all-important. Reading in bed is not to be encouraged; it promotes slovenly habits of mind, though many sleepless people read in bed to prevent their too active brains from thinking and worrying. It would be better to get out of bed and read at a table until too tired to sit up any longer. A copious drink just before retiring will sometimes promote sleep; with some people a hot drink, and with others a cold one.

Many people go to sleep at once on retiring, and then, after an hour or two, wake up and lie tossing and restless until nearly morning. This is very often due to an unsuitable or indigestible supper, and will come right of itself as soon as the dieting is set right; but it may be due to a lack of nourishment, and then a few biscuits and a glass of milk taken in the night on waking will lead to a refreshing sleep. As to the drugs and medicines which counteract sleeplessness, in each case which will not yield to simple measures medical advice must be sought. The fear of cre-

ating a habit which will enslave the sleepless one for the rest of his life will be enough to deter unskilled persons from recommending drugs for want of sleep. (*See also "Insomnia."*)

Smallpox.—This disease is always and only caused by contagion; it is impossible for anyone to contract smallpox without coming into personal contact with someone who has the disease already, or with clothes, bedding, or books which have been in the sick room.

It is most important to know that *patients are contagious, even before the rash comes out*, and that *the poison is given off into the air even from the bodies of those who have died of the disease*. People of both sexes and at all ages are liable to it; even the unborn child within the womb may suffer from smallpox, and be born marked with the results. At the present time smallpox is not common, and the number and severity of the epidemics have been reduced by improved sanitary measures, by greater cleanliness, and, above all, by efficient vaccination. Generally, the disease occurs only once in the same person.

The disease begins suddenly, twelve days after catching it, with a severe pain at the bottom of the back, shivering, and fever; headache and vomiting. On the third day the rash comes out. (See "Rashes on the Skin," number 3.) There are several varieties of smallpox, named according to the type which the rash assumes. When it occurs in those who have been vaccinated years before, it is very mild, and is called varioloid.

Treatment.—Nowadays, when a case of smallpox occurs, the patient is generally taken off to the nearest fever hospital, where the treatment is, as a rule, excellent, and where the patient will probably recover. Smallpox is apt to leave behind some very disagreeable complications—abscesses, conjunctival inflammation (*see "Eye Diseases"*), middle-ear disease (*see "Ear Diseases"*), bronchitis or paralysis. Cases of varioloid generally make a good recovery. Cases in which the spots (or pocks) run together, are more serious. These are called *confluent* smallpox. The general principles of treatment are the same as for measles (*see "Measles"*), namely, isolation, disinfection, and rest. There is no method known which will, in every case, prevent the scarring and pitting of the skin. (*See also "Vaccination."*)

Sore Throat.—There are very many forms of disease which may affect the throat, and so we very often hear persons say that the throat is sore or relaxed. Sore throats may be considered in three groups. The first and most common forms are those ailments due to catching cold from exposure to cold and wet. The second group are those cases of sore throat which accompany acute fevers, such as scarlet fever and diphtheria; these are terribly infectious, and are of a more serious nature. And the third sort are truly ulcerated conditions of the throat, due to the ravages of venereal disease. Cases of this last variety come in the secondary stage after infection. (*See* “Syphilis.”) The soreness may last for months. The second group, those of the infectious fevers and sewer-gas poisoning, are acutely painful, and are accompanied by high fever. In scarlet fever, unless very severe, the throat gets well in a week. In diphtheria, which mostly affects the throat, nostrils and windpipe, soreness is less painful, but even more dangerous, because there is a growth of false membranes in these parts which may cause suffocation. There remains the class of sore throats which arise from chills; there is hardly any more common accompaniment of a cold, or catarrh, as doctors call it, and some persons have several attacks each year; but they rarely last more than a week or ten days. Three varieties may be mentioned—first, a simple relaxed throat, in which the mucous membrane is seen to be red and somewhat swollen, with a long, puffy uvula (the little ball which hangs in the center of the throat), and an increased amount of secretion. The next form is more violent; there is a bright redness of the parts, with swelling of the tonsils, pain and difficulty in swallowing, accompanied by thirst, heat of skin, and general feverishness; this sort of attack may pass off in three or four days. The most severe form of sore throat is seen when the attack beginning as last described ends in a definite inflammation of one or both tonsils, passing on in the course of a week into quinsy (*see* “Quinsy”); and in such cases an abscess forms on one or both sides of the throat, and then there is no comfort until the abscess bursts or is opened by the knife of the surgeon.

Treatment.—In simple relaxed throat, where there is no fever or inflammation, astringents are needed locally, either as lozenges, or pastils, or jujubes, medicated with tannin,

rhatany, or catechu. Formamint lozenges are an excellent remedy, because they disinfect the throat. Or gargles may be used, containing alum, or sulphate of zinc. The chemist will adjust the strength according to the age of the patient. Some prefer to have the parts painted by a soft brush dipped in glycerin of tannin, or a weak solution of the chloride of zinc. All these remedies must be got properly made by a chemist of suitable strengths. Quinine and iron tonic medicines will also be required to tone up the system.

Tonsillitis.—In acute inflammatory sore throat the patient would do well to knock off work as soon as the symptoms are developed, and to take to bed until the fever and inflammation have passed away. Let him go to bed after a hot bath—if there be a convenient bath indoors—and take a good strong dose of saline purgative, with something warm added to check pain; such a dose as compound senna mixture, or Epsom salts with essence of ginger. Put on ample bedclothes, and try to produce a profuse perspiration. Steaming the throat will give much relief, and put on a warm poultice round the neck; it may be made of hot water with bread, or linseed meal, or boiled turnip. During the next two or three days the patient must take only liquid nourishment—gruel and broth—no alcohol, and must not smoke. When the acute illness has passed off the case will need treating as for relaxed throat as already described. In the more severe cases, when there is quinsy (abscess), poultices on the neck will be much needed, and, in addition to simple steaming of the throat, inhalations medicated with compound tincture of benzoin (teaspoonful to half-a-pint of hot water, repeated), and other drugs will hasten the cure. Additional internal medicines, such as aconite, antimony, or antipyrin, are commonly administered every two or three hours, to combat the intensity of the inflammation. These require a doctor's prescription. Cases of quinsy require careful treatment by tonics and local astringents for several weeks after the disease in the tonsils has subsided.

Specialists.—A specialist, in the medical sense, is a medical man who, having gone through the course of study necessary for the training of every registered doctor, has given up “general practice” in order to study and treat special diseases or the diseases peculiar to one special or-

gan. There is no specialist who makes a profession of dealing with only one disease—such a man would not be worth his salt. He is not necessarily better educated or more highly trained than the family doctor, and in very many instances he is not as skillful as the family doctor, because he (the specialist) in studying his own specialty is very apt to become narrow in his judgment, and to tinker unnecessarily at the diseases or organs which he knows most about. There are several recognized “specialisms” in medicine and surgery. Such are diseases of women, diseases of the nose, ear and throat; diseases of the skin; diseases of the eyes; venereal diseases. It is quite certain that as time goes on specialists will become more and more numerous; but persons who can afford it are too ready to run away to a specialist with diseases which the family doctor is perfectly competent to treat. Few people are superior to the curious vanity of supposing that their illness is unusual, rare, difficult to treat, and requiring the special services of a specially-skilled person! There are no such doctors as “specialists in rupture,” varicocele, asthma, bone diseases and so on.

Spectacles and Failing Sight.—We refer in this article to the failing sight of those persons of full age or advancing old age, who have enjoyed good sight all their lives. Much of this, however, will also be applicable to those who are habitually short-sighted or too long-sighted. These two faults depend upon a naturally badly-shaped eyeball, and the vision is apt to fail earlier in life than it does in people with well-formed eyes. The most common reasons for failing sight in adults are cataract, glaucoma, and amaurosis, to which may be added opacities, clouds on the cornea—that is, the window front of the eye. These last arise from injuries, or from ophthalmia, which means inflammation of the eye surface, generally arising from injuries due to irritating dust or other substances. (See also “Eye Diseases.”)

By *cataract* is meant slowly-growing opacity, or want of transparency, affecting the lens within the eyeball. The effect of this is to hinder the rays of light from passing into and across the interior of the eyeball. A similar effect is seen when a clear plate of glass is breathed upon, or is dusted over with some fine powder; one can no longer see clearly through it. Cataract is due to a slow deterioration

of the structure of the lens—a process of decay. No definite cause is known; all our organs may wear out, each in its own peculiar way. Either one or both eyes may be affected at once, or one may first suffer and then the other. No curative medical treatment is known of, and the usual practice is to await the stage of blindness, and then to remove the offending lens by a surgical operation; if this succeeds the patient will be able to see very well again, with proper glasses.

Glaucoma is the second serious cause of blindness, and is often a painful disease, which cataract is not. This is a state due to obscure inflammation within the eyeball, by which it becomes tense and hard from undue internal pressure. It is more common in a chronic form, but it may suddenly appear, with violent pain, as an acute disease, which may very soon result in blindness. In some cases, a greenish color is seen when looking into the eyeball, and another symptom is the sudden onset of a state of long-sightedness.

Amaurosis, the third form of disease is a slowly progressing failure of sight, due to disease to the nerve structures of the internal parts of the eye; it is a sort of palsy of the nerves of sight, and may result from diseases of the brain, and may follow apoplexy.

Our sight is one of the most valuable gifts, and any disorder of vision should send a sufferer in all haste to an ophthalmic surgeon, who makes diseases of the eye a special study.

Spinal Curvature—Deformed Back.—There are several varieties of deformity affecting the spinal column, and these may be curable or incurable. They may be due to general debility and muscular weakness, or to bone disease.

The spine should be straight up and down when seen from behind; but when seen from the side, it has special curves in health. The natural curves may be lost, and improper curves appear in delicate persons, from bad habits of sitting, lounging, or working. Children at school often sit very badly at their desks, and, of course, many trades cause deformity from the continued necessity for occupying a constrained position, as in cobblers and tailors.

Near-sighted persons often have a bent neck and stooping gait from the need to lower their eyes to their work. Nurses may get a bent spine from long carrying of heavy

babies. Blacksmiths, who use the right arm so much more than the left, often get the spine somewhat curved. Attacks of pleurisy, by injuring one lung, often deform the chest and back. Hip-joint disease and other ailments of the leg and foot, by causing shortening of one leg, are often followed by a spinal curvature.

All these deformed conditions are of gradual onset, and of slow progress; but once developed they are very difficult to cure.

Persons who are most likely to suffer are those who are born with a scrofulous constitution. (See "Scrofula" and "Chest, Shape of.") They are generally thin, pale, sallow people, flabby of skin and muscles, and they have a tendency to enlarged glands in the neck, large tonsils, large bodies and thick lips.

Lateral curvatures are mostly from debility, and are seen in girls and young women who have outgrown their strength. One shoulder becomes higher than the other, and the shoulder blades bulge out behind; one hip projects too much, and the other looks too small. The spine about the middle of the ribs projects too much either right or left. This deformity injures the lungs more or less and displaces the heart, and so there may be pains in the chest or back, or in the sides, and the breathing may be oppressed and the digestion disordered. The opposite sort of curvature from before back may arise from an injury or from disease of the bones called *vertebræ*, which compose the spine. In this form tuberculous or consumptive disease may cause decay of one of the bones, so that instead of its being firm and hard it will soften down into pus and matter, and so form an abscess; the body weight then bends the spine at the spot thus destroyed by disease. The result is an angular curvature, leading to *hump-back*. This disease is often fatal, although many cases recover health to some extent, and even become robust, though always deformed.

In childhood bent backs can be treated with some hope of success by means of mechanical appliances, but those occurring in later life can rarely be treated successfully. The great object is to improve the general health over a period of years by means of good feeding, suitable exercises, frequent changes of air, and by giving cod-liver oil, maltine, and syrups of lime and iron.

Sprains.—When a joint is sprained, there is at first a little pain and much weakness. Then the patient lies down and the pain grows worse, and, either at once, or very soon, the joint begins to swell. The structures in the interior of the joints have been violently treated and they soon begin to bleed under the skin. That is called at home “black-and-blue” and is the result of a bruise. The very first thing to do with a freshly-sprained joint is to hold it under a stream of cold water from a tap for about ten minutes. Then let the patient lie down and rest, and, if the doctor has not yet arrived, put the sprained joint in a thoroughly comfortable position, and wrap it in *plenty* of cotton wool, and *bandage it firmly* and rather tightly. If there is enough cotton wool, it will equalize the pressure after a few minutes. It is not a good plan to poultice the limb, even to relieve the pain, because the swelling is increased in that way.

The greater part of the pain and loss of function after a sprain results from the swelling, which is caused by the escape of blood and serum into the tissues. Recently two methods have been employed to prevent this, either to “strap” the part with adhesive plaster, or to employ massage from the beginning. The latter is becoming the more popular for small sprains.

In sprains of gouty and rheumatic and consumptive people, constitutional medical treatment by a doctor *must* be undertaken, or there is a serious risk that the joint may become damaged for life.

Sometimes after a sprain there remains a good deal of chronic thickening of the skin and structures of the joint. In such cases people sometimes neglect them until it is too late. Massage and the application of hot and cold water douches alternately, are useful measures.

Squinting.—This well-known deformity generally begins in very early childhood, but in a few cases children are actually born, if not with a squint, at all events with the paralysis of one of the eye muscles which cause a squint as soon as the eyes begin to see things. Squinting is caused, then, by paralysis or weakness of one of the muscles which turn the eyeball from side to side, or up and down. The patient tries to look at the same point with both eyes, but one eye cannot be brought to bear on the right spot, and the patient then is said to squint. If one

eye, looking straight ahead, sees an object, and the other eye looks in another direction, away from the sound eye, then the second eye is partly paralyzed, and squints. This is called divergent squint, because the lines of sight diverge from one another. If, on the other hand, one eye looks straight at an object, and the other eye looks across the path of vision, then the squint is called a convergent squint, because the lines of vision converge and cross each other. Such a person is called cross-eyed. Sometimes the squint is permanent; sometimes it happens only when the eyes are tired; sometimes only one eye is paralyzed, and in other cases both eyes squint. When the sight of both eyes is good, and when the squinting is not caused by paralysis, it is generally curable by operation. The causes of squint are many and various. A baby may squint as the result of irritation caused by worms in the bowels, or by irritation of the nerves caused by teething; and the disease known as "water on the brain," of which the proper name is hydrocephalus. In the great majority of cases, however, the optic nerves and eyeballs themselves are badly developed second-rate organs, generally smaller than they should be, and badly shaped. The operation that is done is to cut through the muscle which pulls the eyeball out of position, and the muscle is left to attach itself to a more suitable part of the eyeball. It may be necessary to operate twice, or even thrice. The operation is often successful, but sometimes is not. It can do no harm, if skillfully done, even if it does no good. Squint caused by paralysis cannot be cured in the majority of cases.

Stammering.—We are frequently asked what to do with a child who stammers. There are a few well-known methods of dealing with stammering, and some specialists claim to be able always to cure the complaint. Boys at an ordinary school who stammer are very heavily handicapped, and their lives made almost unbearable by the thoughtless teasing and wanton mischief of the other boys. In itself, stammering is not caused by general debility; but stammering often causes general debility, spoiled tempers, and ruined dispositions. Boys who stammer are generally backward in their education, because they cannot say their lessons, even if they know them; and if they are lazy, they shirk their work because they think their stammering will cause it to be passed over. Masters cannot be blamed

for passing them over, either, as their time, and the time of the whole class, cannot be wasted in waiting for a stammering boy. Some masters, out of kindness, try and help the boys; but the advice is often misguided, and makes things worse. All this leads to the conclusion that a boy who stammers ought to be taught only at a special school for stammerers. The question of what to do with a boy or girl who stammers is really a serious one, as we have seen, if the stammerer is to earn a living in these days of keen competition. There is no doubt that stammering is a spasmodic nervous disorder, and the first need is for medical treatment, directed towards quieting down a too sensitive nervous system. It will be noticed that nobody stammers when he sings; and so the best way for a stammerer to begin to cure himself is to say everything in a sing-song way, and only very gradually to come to one note, and then to ordinary speech. The stammerer finds his greatest difficulty in the use of consonants as "f" and "v" which entirely supersede the passage of air through the nose, and where the necessity arises for firm contraction of parts of the mouth. But the real cure of stammering must be left to the specialists, only one or two of whom are medical men.

Stomach Diseases.—It is often a difficult matter to discover whether the stomach is diseased or not, because symptoms arising from upset stomach and disordered digestion accompany almost all fevers and many other diseases as well. True stomach pain is not very common, but stomach-ache is the most usual name for all pains in the body lower than the fifth ribs, so that the name has lost all accurate meaning. Stomach-ache, in most cases, means a pain in the intestines or bowels, due to either colic or the irritation accompanying diarrhea. Most people speak of "stomach" when they mean "belly" or "abdomen." Now, the stomach itself is a hollow bag, with thin coats; its sides fall together when empty; but when food and drink are taken it will dilate so as to hold one or two quarts; then it gradually shrinks as it empties itself during digestion, into the bowels. *Diseases of the stomach itself* are of two kinds—organic, in which the coats of the stomach are diseased by inflammation, ulceration, or cancer; and functional, in which the action of the stomach as a digestive organ is

alone impaired. The healthy stomach when it receives food, pours out a liquid called gastric juice, which digests the food, especially meat foods. During digestion the stomach is in constant motion, though we are quite unconscious of it, churning up the chewed food and gastric juice together. This process should be painless. It will be obvious, when thought about, that if the internal coats of the stomach are tender, sore, or inflamed, the movements of the stomach will be painful; and if the patient be in bad health, the gastric juice will not be in a good condition, and so the food is delayed in the stomach, imperfectly digested. The results are that the food ferments, turns sour, and causes nausea and sickness. Diarrhea often follows this state of indigestion, which doctors often call dyspepsia. The liver often "sympathizes" with an upset stomach, and then the bile also becomes unhealthy, and unable to perform its special duty of digesting fats in the intestines.

Gastritis.—Gastritis is the name for inflamed stomach. Acute gastritis is not usual; it is due to poisons, caustics, swallowing hot liquids, and violent spirit-drinking bouts. Chronic gastritis is often associated with liver disease, improper diet, free drinking, and especially with consumption of the lungs. It is shown by nausea and sickness, pain under the left ribs in front and side, some tenderness there, water brash, heartburn, and disordered action of the bowels.

Bilious Attacks.—Gastric catarrh may come on as part of a general cold or catarrh, or it may come on periodically, especially in feeble persons, who generally call this ailment by the common title of *bilious attack*.

Dilated Stomach.—In some unfortunate persons the stomach dilates with each meal, but fails to shrink back to its naturally small, empty state; and after some months of dilating, a state of chronic indigestion arises, because the stomach is never quite emptied between meals, as it should be. In this condition there are nausea and occasional sickness, with loss of appetite and cramp-like pains in the stomach; constipation is common, with much flatulence. Vomited matters will be found dark, undigested, and sour-smelling from having been delayed so long as to have fermented.

Cancer of the stomach.—Cancer of the stomach is most often seen in men past middle age; it is a very painful disease, and proceeds to a fatal issue.

Ulcer of Stomach.—Ulcer of the coats of the stomach is an ailment very common in young women, and this also may be fatal, from accidental rupture of diseased blood vessels. If a young woman complaining of want of appetite, pain after eating, and general indigestion, is found to become daily more pale and weak, the presence of an ulcer in the stomach must be suspected. The ulcer is round or oval, and on the inner aspect of the stomach coats, but may be on the front or the back of the organ; according to its position, the place where the pain is felt will vary. The pain is worst after food for an hour or more; sour liquids rise up in the throat, and slight vomitings are common. There is most danger when such an ulcer eats so deeply into the coats of the stomach as to cause bleedings. There may be only smears of blood on what is brought up by vomiting, or there may be a tablespoonful or more of blood, generally dark and clotted, and not frothy, as it is when coughed up from the lungs. Of course, if an ulcer eats into a large vein, the bleeding will be profuse, so great even as to cause fainting; but the hemorrhage may be all internal and give no sign of its occurrence.

Perforated Ulcer.—An even more dangerous accident is when the ulcer eats quite through the thin stomach walls, and then the blood, liquid food, and gastric juice escape into the general space within the body. Such an event causes instant collapse, intense pain, and very often a sudden death. In that case the only chance of recovery is an immediate surgical operation to sew up the perforation. From these facts it will be obvious that cases of severe indigestion should be watched by a doctor. In mild cases of dyspepsia, domestic treatment should endeavor to regulate the bowels to one or two daily actions by means of rhubarb, senna, or cascara. A dose of rhubarb, soda, and ginger will often relieve stomach discomfort. Indigestion should not be treated by giving spirits, because it is easy to begin a habit of having recourse to strong drinks to cure small ailments. (See "Indigestion.")

Stone in the Bladder.—(See "Bladder Diseases.") The signs of a stone in the bladder are—pain in the region of the bladder, and in the bottom of the back, too frequent,

desire to pass water; the water passed often containing blood (and looking "smoky"); the passage sometimes of pure blood; shivering fits. The pain is generally most violent immediately after passing the last few drops of water.

Strong, How to Become.—(*A warning!*)—This is too wide a subject to deal with in much detail within the limits of the short articles in this book.

Everyone nowadays realizes that to become physically strong it is necessary to live steadily, purely, cleanly, and to take sufficient and suitable exercise. The leisured man gets his cricket, his football, his tennis, his golf, and his hockey. The man of small means and small leisure time must needs take his exercise in walking or in gymnastics. The home-gymnastics method is now very largely catered for. There is an ever-increasing crowd of "professors" and "strong men" and "culture teachers" of more or less ability. They nearly all have one serious fault. They advertise that they can make anybody and everybody "strong." They show photos and pictures of men of enormous and unnatural muscular development, and they try to make you believe, first, that it is desirable to have such an excessive development, and secondly, that, whoever you are, you can be made equally big and strong by their particular method. Now, it is an undoubted fact that thousands of people are lamentably undeveloped in every way; that girls grow up flat-chested and narrow-hipped all over the country. Hence the frequent advertisements of bust developers, which aim only at increasing the fat over the neck and breasts and at enabling a woman to present a *good appearance*. Young men are to be seen in plenty, round-shouldered and flabby in muscle. No one will wish to deny that all these young people could be improved by systematic development, and, if only the gymnastics employed are *suitable* to the individuals, all will go well. With gradual muscle development comes renewed health.

But the "let-me-make-you-strong" professor teaches that *anyone* can attain a fine physical and muscular development. This is not true. Doctors will tell you that very numerous cases of damage done by injudicious muscular exercise come to their notice every year. The physical culture cranks keep very quiet about the overstrained,

hearts, and the muscular debility and the mental impoverishment produced in some of their customers. It is so easy to go to excess in the ambition to become a Hercules—so easy to overtax a heart that would have been quite adequate for all ordinary purposes. Not everyone has a heart and vessels which will bear the strain of daily concentrated muscular exercise. Only the very few can ever attain to the dimensions of a Samson. Once a person has had *rheumatism*, for instance, his heart is forever unfit to do much more than the ordinary routine demands. (*See* "Exercise and Recreation.")

Struma.—(*See* "Scrofula.")

Stun.—(*See* "Concussion of Brain.")

Styes.—A *stye* is inflammation, and, at last, abscess round the root of an eyelash. The whole eyelash gets red and swollen, and just as one stye is quieting down and getting well another one begins. Styes are practically boils of the eyelid.

Treatment.—As soon as you see a stye, look at the eyelid through a magnifying glass, and with a fine pair of forceps pull out the eyelash which is in the very center of the reddest part of the inflammation. A tiny drop of matter may come out then, and when it has been wiped away with a clean bit of cotton wool, touch the place with the blunt end of a needle which has been dipped in pure carbolic acid. In those cases where styes are always coming, owing to the weak state of health of the patient, it is a good plan to apply weak yellow oxide of mercury ointment along the edge of the eyelid twice a day. The patient ought to ask his doctor to prescribe a tonic for him also.

Summer Holidays.—Now is the time to sound a note of warning for those who are going to take a holiday—the one holiday, perhaps, of the whole year. What are the benefits that we expect to derive from this yearly cessation from work? It is, firstly, a change of occupation for the mind, and change of occupation means rest, and rest means recuperation and refreshment. Secondly, it is a change of habits, diet, and air for the body. The change brings fresh zest to life, fresh enjoyment to mere eating, drinking, and sleeping; and if a holiday is properly used, the whole system is invigorated. But, just as there is a right way and a wrong way in everything else, in holiday

making it is possible to be foolish and thoughtless, and to return from the annual outing in worse condition than before. The artisan's wife and children go down to Ocean Grove for a fortnight. The children (unless they are allowed to paddle beneath a broiling sun and get sunstroke, or else overeat themselves with fruit or ices and get choleraic diarrhea) will very likely benefit greatly by the change of air, by the exercise, the lack of restraint, and the country food. But for the wife and mother herself the holiday is too often but a period of extra anxiety and worries. The bother of getting suitable lodgings, of packing for the family, of procuring and preparing victuals in unfamiliar and often unsuitable places, and the worry of keeping an eye on the children, to see that they don't fall into the sea, off the end of the pier, or over the side of the *Skylark*, or get lost on the crowded sands—all these matters deprive the poor woman's holiday of a good deal of its restfulness. Poorer and less fortunate people still (and there are hosts of them in our great cities and elsewhere) get, perhaps, only a few days, or a week, of holidays. It is no real holiday to scamper off to Ocean Grove by the steamer for one day only. Thousands do it, and, perhaps, the change does some of them good. But the weakly ones only get tired out, and we have seen children and adults in these crowds, at the end of the day, thoroughly exhausted with unwonted excitement and bustle. Holidays should be arranged with a view of restfulness. If your holiday time be very short, don't go a long way from home to a crowded place. Go into a quiet country or seaside place; sit about in the open air and sunshine; don't "live" every minute of the time in the silly, nervous, modern way, but just "exist," quietly enjoying the calm beauty of the landscape, or the sea, or whatever scenery there may be, and the inspiring music of the bands. Then, when you return to the busy hum of city life, with its unending toil, you will feel that the "holy calm," and perfect quiet and rest, have done you some real good. (*See also "Change of Air."*)

Sunstroke.—(*See "Heatstroke."*)

Sweating.—(*See "Perspiration."*)

Syphilis (The "Bad Disorder").—This is the most important of the venereal diseases. Syphilis spoils the lives of thousands every year. It is contagious, not only through

sexual congress, but even through kissing, or using the pipe or cup of a contagious person. The disease is indeed a dread one, and those who suffer from it may infect a great many during the two or more years that the contagiousness lasts. The man who contracts it, if untreated or improperly treated, may suffer from it, or its complications, *all his life*; and symptoms may crop up as many as thirty or more years after it was caught. Thousands of wives suffer chronic ill health all their married life from having caught syphilis from their husbands. Hundreds of doctors suffer from blood-poisoning caught from patients with syphilis which they have been treating and trying to cure. And, worst of all, the sins of the parents are visited on the children, even to the third and fourth generation; for syphilis is the cause of a large proportion of all *miscarriages*, and hundreds of innocent children are born every year, alive, but with "hereditary" or "congenital" syphilis in their bodies.

There are, then, two kinds of Syphilis—the Congenital and the Acquired.

(1) CONGENITAL SYPHILIS.—Children born of parents in the secondary stage will almost certainly in every case be the victims of congenital syphilis. As a rule, when the parents have arrived at the tertiary stage (*see* next section—"Acquired Syphilis") their child escapes the disease. One attack of syphilis protects against a second; no one gets syphilis twice. In a large majority of cases the syphilitic child is born apparently quite healthy and looks plump and well for about three or four weeks. Then it gets "snuffles," a bad cold in the nose with a discharge of pus and dirty crusts. Then comes a RASH on the skin, on the thighs, back, buttocks, and belly. This eruption is the color of raw lean ham, but it must not be confused with another skin disease called intertrigo. Only a doctor can distinguish them.

Then there may be pimples, blotches, sores all over the poor little body, and the face of the child gets wrinkled and like the face of a little old man or woman.

It must be borne in mind by parents that this disease is very tractable if it is dealt with early enough, and the careful treatment of a family physician will do much towards converting a miserable, puny, diseased baby into a crowing, laughing, healthy little person!

(2) ACQUIRED SYPHILIS.—We shall follow a case of syphilis through all its stages.

Firstly, *inoculation*.—The poison is transferred by sexual connection, or by kissing or other contact, to the healthy skin, and enters it through a minute crack or scratch, which is perhaps too small to be noticed.

Nothing happens for a period of from two to three weeks. Then there comes at the infected spot, a red pimple, like a hard, flat, dry button, called a “hard chancre.” This occurs on the skin. But if the mucous membrane be infected instead, there is a *sore* instead of a button or pimple, which, only after about ten days, seems to be situated on a little disk of parchment slipped under the skin. This, then, is the *hard chancre*, the “primary stage” of this disease.

The writer imagines that no one with any such sore would be foolish enough not to consult a doctor at once about it. And it may be said at once, that if the doctor decides that the sore is a “hard chancre,” then the patient has the disease called syphilis; he will be contagious, and must at once start treatment for eighteen months or two years under medical supervision.

The PRIMARY STAGE OF SYPHILIS, then, consists in the presence of a sore at the place of inoculation. The nearest lymphatic glands (generally in the groin) become hard and lumpy and tender. In some cases, this stage is the whole of the disease, and the victim is never troubled with it again if he carefully carries out the whole two years’ treatment. In the majority of cases, however, four to six weeks after the hardening of the chancre the second stage begins.

SECONDARY STAGE.—Note carefully that these “stages” are only so called for convenience’ sake. Nature does not always arrange the disease *exactly* as here described. The chief signs of secondary syphilis are as follow, but some of them may be absent, and others may be present:—

(1) Eruptions of the skin. These are raw ham or coppery colored; occur on *both sides* of the body; do not itch; do not leave scars; and are sometimes of every possible variety—pimples, blotches, blebs, abscesses, patches, scales, wheals, nodules, scabs, etc.

(2) Moist patches—very contagious indeed—about the mouth, nostrils, and back passage.

(3) Sore throat, which often gets ulcerated, and if not treated well may lead to scars which deform the throat and spoil the voice of the sufferer.

(4) Enlarged glands in various parts.

(5) The hair comes out, and sometimes the nails are shed also.

(6) Sometimes paralysis occurs.

Then comes a period of rest. The disease appears to be gone for ever—cured, and sometimes there is no more of it. But in some people there comes an intermediate stage, called “Reminders” stage.

“REMINDERS” of Syphilis.—These may take dozens of forms. Among them are scaly patches on the hands (called psoriasis of the palms), and various eye troubles.

TERTIARY SYPHILIS.—At last, at the end of about eighteen months to two years after the chancre, the third stage of the disease *begins*. There is no hard and fast line between the secondary and tertiary stages, but when the secondary symptoms have quite disappeared, and two years have elapsed since the chancre, the tertiary stage is said to have begun. As said above, not everyone gets any symptoms in the third stage; but once the last secondary symptom has gone, the disease is no longer contagious, and though the patient may have to suffer himself, at any rate he (generally) cannot make his wife suffer or give the disease to his children. The symptoms of the tertiary stage may be:—

(1) Skin eruptions, scattered, affecting only one side of the face or body, forming sores (ulcers), and leaving deep scars.

(2) Lumps in any part of the body (called *nodes*), on the surface, or in the bones, or in the organs.

(3) Tumors in any part of the body, such as the liver or brain; these are called *gummata*.

(4) Destruction of the testicles in men and ovaries in women.

(5) Fits, convulsions, paralysis.

Now, the reader who has acquired syphilis and who has read carefully all the foregoing is by this time probably much alarmed at the prospect and severity of the disease. He will ask, at this point, three questions:—

(1) How can any one be sure that he has contracted syphilis?

(2) How long, and in what manner, is a syphilitic person dangerous to society?

(3) Can the disease be cured?

The answers are as follow:—

There is only one way of deciding the presence or absence of syphilis, and that is to consult a surgeon of repute, and be guided in this very serious matter wholly by his advice. No one can keep the thing secret and get well. The doctor must be taken into your confidence, and, cost what it may, he must be consulted from time to time for the next two years *at least*.

The answer to the question as to whether syphilis can be quite *cured* turns on the meaning which is given to the word *cure*. Some people seem to get “cured” very soon, and are little the worse for the experience. Yet, if even they decide to neglect the treatment, they will almost certainly suffer in later life. The disease becomes quiescent, but no one can be sure that it will not break out again later on. Whereas the man who continues treatment for about two years is as safe as medicine can make him.

The drug which, by universal consent, is allowed to have most influence in the cure of syphilis is *mercury*. If given regularly—and suitably—from the first it modifies and at last demolishes the disease. *Mercury must be taken*; but as to how it is to be taken we can only say that this must be decided by the doctor, according to the age, sex, and habits of the patient, and the severity of the attack. *It is worse than useless to expect to get one prescription which will suit all cases, or all stages of the same case.* To neglect medical advice in this matter is to run into danger which may affect one’s whole life. Syphilis is curable—in many cases, entirely so; in many others, the patient must be content if he gets rid of all symptoms, and must put up with, as inevitable, the weakness which, to some extent, always remains.

In short, though signs of syphilis may be got rid of, and a *cure*, in that sense, obtained, yet the patient is never quite the same person again, but has been subjected to a poison which may (or may not) give him trouble for the rest of his life. His best chance of escaping the effects of

the disease is to live a quiet life, and especially to avoid alcoholic excess. Alcohol especially renders him liable to, and aggravates, all the symptoms of the tertiary stage.

Recently a new preparation has been discovered, known as "606," for the treatment of syphilis. This has been found efficacious in a large number of cases, especially the old resistant ones; but the technique of administration is difficult and it can only be given by an experienced physician.

Taller, How to Grow.—Let it be noted that Nature seems to have fixed an average height for the Anglo-Saxon—about 5 feet 8 inches—and that she maintains it with considerable persistency. If one's father and mother are above the average height, one is most probably an inch or so shorter than one's parents; if the parents are undersized the child is generally an inch or so taller. If the mother is too short the sons tend to be too tall, and if the father is undersized the daughters are probably taller than the average. There are ways of increasing the height of individuals, nevertheless.

Firstly, we nearly all *stoop*, and do not appear as tall as we really are. This is the first thing to attend to, then, to stand *and sit* upright, even at the office desk. The back muscles need to be strengthened to bring about this result, and that can be done by using one of the "developers" on the market—all are equally good if intelligently used—or with dumb-bells. Indian-club exercise is an excellent means of increasing the height. After thirty it is well-nigh impossible to get taller, except by straightening out the back; or to look taller, except by wearing elevators in the shoes and boots.

Secondly, there is a method used by the American cavalymen and others—stand upright with back to a wall until quite erect. Then take two paces forward away from the wall. Raise the arms slowly with the palms forward, up, up, until the forefingers meet over the head. Keep the arms unbent. Do this slowly, thirty times on first rising in the morning, and thirty times, when undressed, before going to bed at night. Thus can you add about an inch to your stature, if you are not yet thirty years of age.

Tattoo Marks.—Let us urge the reader, whoever he or she may be, not to submit to the wiles of the tattooer,

even for the sake of having the flag or a sweetheart's name or initials tattooed on his arm or chest. In later life everyone regrets these marks, for if tattooing is properly done, the marks never can be removed. Glycerin of papain has been used to destroy tattoo marks, but in any case a skin surgeon should be consulted if removal is desired.

Teeth, Care of.—Our teeth give us trouble from the cradle to the grave. As infants, the growing and cutting of our teeth of the first set cause pain, feverishness, and often convulsions. No sooner are they all cut but they begin to get loose and fall out, and very often they suffer from decay as well. In some states of constitution these teeth may be decayed even before they are cut.

Before all the first set of teeth is got rid of, the first double teeth of the second set appear at five or six years of age, followed by the front teeth, then the side ones, and lastly the double ones behind the first great grinders. This process may be finished at 12 years of age. The four wisdom still remain, and they may not be fully through the gums until 24 years of age, and sometimes they never appear at all.

The cutting of the teeth of the second set may be fairly painless, but the cutting of the final four wisdom teeth may give rise to persistent neuralgia.

A man or woman is blest if born with a good constitution and a perfect set of strong, regularly placed teeth; they escape hours of face-ache, and much indigestion, which is sure to result from improperly masticated food. There are some few people fortunate enough to preserve all their teeth until they reach the age of three score and ten, but they are very few; in olden days they were more numerous, and among savages, uncontaminated by our civilized habits of feeding, they are common still.

Very few of us have no decayed teeth, and many of us lose some teeth almost every year from the time we get them. This is no new ailment, for we know that the ancient Egyptians suffered to some extent from decay of the teeth, and we know that they had some priest dentists, for teeth containing gold stoppings have been found in mummies in Egypt. Some diseases, such as rickets, scrofula, and tubercle, cause early decay of the teeth. But, apart from these diseases, there is no doubt that cookery is largely

responsible for decay of the teeth; the more simple the national diet the healthier are the teeth. Very hot drinks, such as hot tea, and very cold food, like confectioners' ices, play havoc with the teeth and crack the enamel. Long ago, when races ate only vegetables, fruits, and nuts, we believe decayed teeth were unknown; even in the times of the Old Testament food was much simpler than it is now, and the word toothache does not occur in it.

It has been said that wherever you find a toothbrush you will find decayed teeth; and this is no doubt true; but it would be silly to say the former caused the latter. When a race becomes developed enough to indulge in cookery, hot and cold foods, vinegar, etc., toothache begins to be common, and doctors become common, and dentists, too, later on. Under these circumstances, it is wise to adopt the use of the toothbrush, and also certain soft powders and disinfectant liquids may be suitably used with the brush. There is reason to fear, however, that much of the tooth powder, consisting mainly of chalk, which has been retailed the last fifty years, has been much too gritty, and that although it may have made teeth look clean, it may have worn away the enamel of the teeth in places, and may have started spots of decay.

Liquid teeth washes, containing an antiseptic, such as the preparations of carbolic acid, are the most safe. Dental hospitals for the poor exist now in England, and parish doctors will always look at decayed teeth, remove them, or advise what is best to be done. Decayed teeth are always liable to ache, and are a source of danger to health. For instance, sickly children with decayed teeth rarely eat freely, and do not eat enough, because the mouth is so tender.

It is the fermentation of particles of food lying in the spaces between the teeth which gives rise to acid juices, which corrode the enamel surfaces of teeth, and lead to spots of decay. Careful and frequent brushing removes the source of mischief. An excellent plan is as follows:—At bedtime, put a teaspoonful of bicarbonate of soda in the bedroom tumbler full of warm water. Soak some pieces of white silk in it. Draw the strands of silk between the teeth, backwards and forwards until the discolored patches are gone. Then brush the teeth with carbolic tooth powder. If a tooth is healthy when it is

cut it does not decay from within, but from without inwards, because of the decay of the particles of food which are caught in the cracks of the enamel.

The early stage is painless, but at last in each case there comes a day when the erosion by decay opens into the natural space within the tooth, exposes the delicate, sensitive nerve, and toothache begins, and will continue to be felt either continuously or at intervals until the whole of the sensitive pulp is dead.

Even then the danger of toothache still exists, because little abscesses may form at the deep-seated ends of the fangs of the tooth, and it is then that the sufferers rush at last to the doctor or the dentist for immediate relief by extraction.

The teeth, then, are of so much value to health that everyone should pay the utmost attention to them.

There is always an early stage, when the affected tooth may be saved for a time, if carefully stopped by a dentist; but this stage is easily passed by, and then there only remains the cure of the pain by having the tooth taken out. (*See also "Dental Hygiene."*)

Tetanus (Lock-jaw).—Tetanus is a disease which occurs most commonly from Fourth of July accidents, and as a result of wounds made with dirty or rusty instruments or nails.

It is due to a germ found most commonly in the soil and about stables, which enters the body through wounds which may sometimes be so small they are hardly noticed. The most dangerous wounds are the small deep ones, such as those made by nails, and the wounds from firecrackers and toy pistols.

The toxin manufactured by the tetanus germ is three hundred times as strong as strychnine. It poisons the nervous system and causes all the muscles to be thrown into contraction. One of the first symptoms of tetanus is a stiffness of the muscles of the jaw and neck.

When a wound is made by a dirty instrument—a nail, a firecracker or a toy pistol—extraordinary precautions should be taken to disinfect the wound, using peroxide of hydrogen, potassium permanganate solution, followed by bichloride of mercury solution. Copious bleeding of a wound helps to wash out the poisonous products.

An antitoxin for tetanus has been prepared, but it is

of more use in preventing the disease than curing it. As a result of the use of this antitoxin the deaths from tetanus, following an almost equal number of Fourth of July injuries (about 4500), were reduced from 406 in 1903, to 62 in 1907. Observance of the "safe and sane" Fourth in recent years has still further reduced the amount of death and injury resulting at this time of the year.

Tobacco; Ought we to Smoke it?—Let us say in answer to our own question—Yes. So long as we smoke in moderation, and, at suitable times, and do not annoy other people by our smoking, there seems no good reason why we should not smoke. Given as a drug, tobacco does weaken the heart and depress the nervous system. In smaller doses it only quiets the heart and soothes the nerves. So it has its uses, as everybody knows. No one wishes to defend its *abuse*. If a young man finds he has flabby, cold hands, he is very likely smoking too much; but what may be excess for him may be only moderation for somebody else. A smoke often makes one feel more comfortable in mind and body, but the feeling of well-being is not accompanied by a desire for activity (except in a few people who write), but by a desire to stay as long in the easy-chair as possible! So we ought to smoke only when work is done. Many people who suffer from "sick headache," or migraine, as doctors call it, find that tobacco is a wonderful means of getting relief; but others do not get sick headache until they have smoked too much. "What is one man's meat is another man's poison," says the old proverb. People will certainly keep on smoking in spite of cranks of all kinds, and in spite, even, of certain scientific investigations which go to prove that it does no one any particular good, and many people much harm. The pipe is the best way of smoking tobacco, and the seasoned clay pipe is the sweetest smoke of all. Yet the stem of the clay is hot, and, in certain people, leads to ulcers and sores of the lips and tongue. The stronger the man the stronger the tobacco he can stand; but, also, the more he is likely to go to excess. After all, men will do something or other to excess, and excess of smoking does far less social damage than excess of alcohol. Cigarette smoking is generally rather prejudicial, and all smoking is likely to be harmful when inhaling is indulged in. Egypt-

ian and Turkish cigarettes are apt to contain niter, to make them taste strong. They often cause headaches. Cigars of good quality are free from much objection, but few can afford a good cigar. In tobacco-growing countries one can get a good weed for about 2 cents, but here no cheap cigar is worth smoking. Many cigars are innocent of tobacco, and are made of dock leaves, or rhubarb leaves, or dandelion; and are flavored with tobacco juice. Such cigars are smoked only for effect. They taste like what they are—imitation tobacco; and the buyer does not generally want to buy any more of them, if he can procure tobacco in some other form.

Toe-Nail Ingrowing.—This is a very painful and rather troublesome affection, caused by wearing boots too narrow across the toes. The soft flesh and skin at the side of the big-toe nail is pressed upon by the boot and made to overlap the edge of the nail. *The nail does not grow into the flesh*, however, but causes a sore place where the flesh is pressed against a sharp edge of the nail. The ulcer formed is often troublesome when the feet have not been kept clean.

In mild cases, a good plan is to scrape the nail down the middle with a knife or piece of broken glass, until it is hardly thicker than a sheet of paper. Then, all dirt or horny skin should be removed from under the nail. Then, a notch should be cut in the middle of the free edge. These measures help the edges to curl up somewhat and take them away from the flesh. But if tight boots are not worn, and if the edge of the nail is not cut square, the toe-nail trouble will never arise. The first essential, then, is to wear roomy boots with squarish toes.

In very bad cases of ingrowing toe nails, there is only one really satisfactory treatment, and that is removal of the whole nail. This can be done by a surgeon, or at a hospital. Short of this radical cure there are several modes of treatment, of which we give two. One comes from Germany. The plan is to put a fragment of cork under the edge of the nail where it appears to be growing into the flesh. Then pour ten drops of strong solution of ferric chloride on to the ulcer and edge of the nail, let it dry on, and repeat the process every day for five days. A blackish crust forms and the nail becomes so brittle that it

can be scraped away easily. Then the sore may be healed up with a little iodoform ointment, and wider boots must be worn.

The other plan is quicker and rather cleaner. Get a 50 per cent. solution of caustic potash (or caustic soda), warm some of it, and moisten the nail with it. This softens the nail and the soft part may be scraped away with a piece of clean broken glass. Then drop a little more caustic on to it and scrape away until the nail is as thin as paper. Then the offending part of the nail may be easily removed with nail scissors. This is a very good method when dealing with old horny tough nails such as are found on the feet of old men and women of the laboring class.

Tongue, Diseases of.—The tongue has its own special diseases, such as inflammation, ulceration, and cancer, and may, of course, suffer from injuries, such as scalding, or it may be bitten during fits, especially epileptic fits.

The tongue has its minor ailments also, and its appearance varies so greatly from day to day during the course of general diseases that it has been looked on from time immemorial as the guide to a person's state of health. Medical knowledge has made immense strides during the last 50 years, but the state of the tongue still remains one of the most important guides to the progress of a disease.

The tongue of a healthy person is pink, soft, moist, and clean; that is to say, it is not covered with any "fur," or deposit of a white, gray, or brown color. It is extremely important that the tongue should be moist, for if it be dry it causes much discomfort, and sense of taste is lost.

The tongue is discolored and covered with fur whenever there is any form of indigestion, and also during all states of fever.

Another tongue symptom is that of being in a state of tremor; it trembles when it is put out, and the patient is quite unable to hold it steady. This is one of the symptoms of delirium tremens, and is the result of poisoning by alcoholic drinks. The absinthe so much drunk in Paris is especially liable to cause this ailment.

Palsy may also affect one-half or the whole of the tongue, and this is usually one of the results of a severe apoplectic attack, which brings on paralysis of either the right, or left limbs.

Pallor of the tongue—a loss of its rosy pink tint—is seen in the course of anæmia, so common in young women; and in debility the tongue becomes swollen, soft and flabby, so that at its side you may see the marks where it lies against the teeth.

White furred tongue is seen in rheumatic and other fevers, also dyspepsia and congestion of the liver, and all stomach ailments. All who drink too freely are liable to have the tongue furred, and smokers generally have a dirty white tongue.

A bright red tongue is seen in scarlatina, and red dry tongue marks the end of fatal diseases, such as phthisis and pyæmia. A dry brown tongue is a sign of great exhaustion, such as seen in typhoid and typhus fevers and in cases of blood-poisoning. When patients are recovering, the tongue gradually loses its fur, and regains its proper color and moisture, much to the relief of the sufferer.

We may mention that in many illnesses in which the tongue is furred it may be “cleaned” for a time, with bicarbonate of soda solution and a clean towel. This often gives a great sense of comfort to the sick man. Lemon juice may be used if soda fails to clean it.

Too Fat.—(See “Corpulence.”)

Toothache.—This is a sign of some local trouble in one or more of the teeth, or in the jaw, and must be distinguished from neuralgia of the face, though neuralgia is often caused at first by the irritation of decayed teeth. If the pain is made worse by hot or by cold water in the mouth, probably the tooth is decayed and the nerve pulp is exposed. The proper thing to do then is to syringe the hollow tooth out carefully and gently with *warm water* and to put into it afterwards, *without any pressure*, a little plug of cotton wool steeped in creosote, or oil of cloves, or cocaine dissolved in oil of cloves. If the pain is due to inflammation in the pulp cavity (*i.e.*, inside a tooth) no relief will be obtained till the pus can get out, and a visit to the dentist should be made.

If all the gums around are swollen and tender, the necessity of a dental surgeon's advice is all the greater. Whatever you do, do not be beguiled into trying to “cure” your toothache with any of the so-called “neuralgia cures.” They will be useless while the local state of things in the mouth is unattended to. It would be difficult to overrate

the importance of keeping the teeth in order. Decayed teeth are really little nests of disease germs and may cause consumption, enlarged glands, indigestion, ear disease, fits, &c., &c.

Trade Diseases.—There are certain trades and occupations which have important relations to certain diseases, which are therefore grouped together here under the above heading.

I.—*Lead poisoning.*—All workers in lead, such as factory hands in lead works, painters, compositors, plumbers, glass and pottery polishers, and white lead makers, are liable to suffer from a group of symptoms caused by the absorption of lead into their systems. Lead may also be taken into the body in poisonous quantities in drinking water contaminated by lead pipes, in cider, or in tinned fruits.

It is the lead glazers who chiefly are liable to lead poisoning, as they inhale dry lead salts.

Symptoms.—Early signs are muscular weakness, debility, and pallor of the skin. Then follow some or all of these symptoms:—A *blue* line along the gums, absent where the teeth have fallen out and often absent in those who clean the teeth regularly. *Colic* and constipation, generally very painful indeed, and lasting, sometimes, several days. *Wrist-drop* and *foot-drop*—the muscles which should hold up the wrist and foot respectively become paralyzed. *Convulsions* and *violent headaches* may occur. *Anæmia*, and all its consequences. *Kidney disease*, with scanty urine.

Treatment.—In lead works the foremen generally know what to do when there are signs of lead poisoning in any of the workers. Colic is to be dealt with by hot fomentations and morphine injections, which the doctor will give with his hypodermic syringe. (See also “Lead poisoning.”)

II.—*Arsenic poisoning.*—Those who work at arsenic ore smelting, and in factories of wall paper, and elsewhere, all are liable to suffer from arsenic poisoning. The symptoms are those of multiple neuritis—vague pains and tingling in the limbs, weakness and wasting away of the calves and thighs, wrist-drop, and “dropped foot,” hoarseness, squinting, and tenderness of the calf muscles. In addition to these there may be cough, diarrhea, eczema, headache and trembling.

If the patient gets away from the source of all the mischief, namely, the arsenic, he will get well. Otherwise, he will not.

III.—*Phosphorus poisoning*.—The fumes of phosphorus are apt to affect those who work in match factories where the yellow form of phosphorus is in use.

These workers are liable to have “phossy jaw,” which is a local disease of the jawbone due to the irritation of phosphorus which has got in through a hollow decayed tooth. All factory hands should take special care of their teeth. Special medical treatment is necessary.

IV.—*Mercurial poisoning* occasionally occurs in felt-hat makers in which occupation mercury nitrate is often used. Sometimes a man gets an inflamed mouth while dosing himself with mercury for syphilis. The treatment for this is to stop the mercury for a time and suck chlorate of potash lozenges continually.

V.—Among other diseases caused by occupations are—*aneurism*, to which laborers and porters are liable; *bronchitis*, *emphysema* and *deafness*, from which glass blowers often suffer; *sore throat* of a special type, common among the clergy; *fibroid consumption of the lungs*, set up by irritating particles of metal, is common among flax-workers, iron-workers, steel grinders and millers.

VI.—Special forms of nervous cramps and paralysis occur among typewriters, clerks, and telegraphists. Miners are liable to suffer from jerkiness of the eyeballs, and shoemakers and tailors and leather-workers sometimes get wry-neck of a spasmodic kind from sitting too long in one attitude.

Training.—As our object in this book is to be of use to as many of our readers as we possibly can, we feel it our duty to say something on the subject of athletic training. The *object of training* is to bring about the development of the highest degree of activity and endurance and strength possible to the human body. Some loss of stored-up material (principally fat) always takes place in this process; and so, if it be carried too far, the athlete is at last weakened and is then said to be *overtrained*.

Training consists in a combination of dieting and exercise, and takes about six weeks to accomplish. The muscles get harder, the whole skin improves in appearance and the athlete feels more and more “fit” every

day. The change from ordinary feeding to a training diet should be gradual and not sudden. A diet consisting largely of lean meat is necessary, but this reminds us that no one ought to be allowed to undertake "training" on these lines, or to enter for feats of endurance or strength, if he is over 35 years of age, or if he is gouty in tendency. But no really sensible man begins training without having had himself "overhauled" first by the family doctor.

The diet then is to be roast or grilled underdone beef and mutton, with a moderate allowance of vegetables and bread. All entrées and pastry and puddings and sweets are absolutely forbidden. So are all sauces, condiments, and pickles, for their only use is to increase artificial appetite.

The drink allowance is to be limited, and there is to be *no* allowance of spirits; occasionally, a very light dry Rhenish wine may be taken. Toast-and-water, barley water, cocoa, tea and coffee are to be the beverages. There are to be *three meals* a day. We append below the schemes of training which are adopted at Oxford and Cambridge Universities for the inter-university boat race every summer. As to *exercises*, we can say little; no one will be able to train quite satisfactorily without personal advice from a trainer; we can only suggest the dietary.

A day's training for the boat races. (Summer.)—(By Dr. Maclaren):—

CAMBRIDGE—

A run of 100 or 200 yards, as fast as possible.

Breakfast.—Underdone meat, dry toast, two cups of tea, watercress occasionally.

2 P. M.—Meat as at breakfast, bread, potatoes, greens.

One pint of beer. Dessert, oranges, or biscuits and figs, 1 to 2 glasses of wine.

Rowing exercise during late afternoon.

8:30 P. M.—Cold meat, bread, lettuce or watercress, one pint of beer.

10 P. M.—Retire to bed.

OXFORD—

7 A. M.—Rise. A short walk or run.

8:30—Breakfast.—Underdone meat, crust of bread or dry toast, tea (as little to be drunk as possible).

2 P. M.—Dinner.—Meat, bread, no vegetables (not strictly adhered to), one pint of beer.

5:30—Rowing exercise.

8:30—Supper.—Cold meat, bread, sometimes water-cress, one pint of beer.

10 P. M.—Retire to bed.

It will be observed that at both the universities the undergraduates take two pints of beer daily during training. Professional trainers and professional athletes are mostly teetotal; and it yet remains to be proved whether, even for young fellows, undergoing training for special events like the boat race, it would not be much better if they adopted a training diet which excluded alcohol altogether.

Tubercle.—A *tubercle* is a little tiny granule (in some organ such as the lung), made of a collection of cells which have gathered together to try and limit the poisonous effects of one or more tubercle *bacilli*, or *germs*, which occupy the center of the tubercle. The bacilli are breathed into the lungs (for example), find that there is a suitable place for them to grow in, and begin to multiply as fast as they can. From that moment the person becomes “tuberculous.” But his resisting power may be so great that the germs are surrounded by cells which soon cut them off from all nourishment, and then they die; and the place where they had found a temporary lodging turns into a sort of cheesy mass which is harmless. Then the person is said to be *cured* of his tuberculous disease. Too frequently, however, there are some bacilli left, which only await their opportunity to start a fresh patch of disease, whenever the person gets run down. There are hundreds and thousands of people who are exposed to the tubercle bacilli in the air every day of their lives. Hundreds of them become infected over and over again, and get rid of it by a natural cure. Many a person with a bad cough has a small infection of tubercle, which he will presently get cured of. Every person with even bad tuberculous disease may hope that he will get into a stage of *quiescence*, which is about the best that can be hoped for. If a case of tuberculous disease is taken early and treated well, there may be a complete cure; but, too often, the damage done to the organ affected only admits of “quieting” and not curing the disease.

Tumor.—The word *tumor* means a swelling, and nothing more than that. But the word is applied not so much to diffuse and generalized swelling (such as occurs on a shoulder after a severe bruising, for instance), but to “lumps” or “knobs” of any sort caused by inflammation or by the growth of “new tissue,” such as cancer. A tumor which, if it were removed, would not be replaced by another of the same type, is called a *benign tumor*. Such are fatty tumors, birth-marks or *nævi*, bony knobs, cysts (wens), and fibrous growths, like warts.

A tumor which, if removed, would only be replaced by another of the same type, and which, if left alone, would ulcerate and cause the patient’s death, is called a *malignant tumor*. Such are all the forms of cancerous, and sarcomatous growths.

Typhoid Fever.—Although this disease is less often found in an epidemic form than it used to be, before the drainage of our towns was carried out so efficiently, yet it is still a very common ailment in solitary cases. It is generally spread through the contamination of drinking water, or milk, or oysters, or by the rise of sewer gases from drains or sinks into our dwelling houses. It is but very slightly infectious in ordinary ways, and cannot be caught from the breath of a patient, and only from touching a sufferer when the skin has been soiled by discharges. Even those who nurse cases of this disease very rarely become infected.

Cases of typhoid fever vary very much in severity; a few persons are able to keep up most of the time, but the majority of those who have it need to remain in bed for four or more weeks. Children seem to suffer less severely than adults; both sexes are affected, and young adults generally have the most severe attacks. It attacks rich and poor almost equally, and it may so lower the vitality that although a patient may recover from it, he often, soon after, goes off into consumption. On the other hand, many people, on recovering from typhoid fever, get better and stronger than they ever were before; and some consumptives get quite cured of their consumption by an attack of typhoid fever. This disease is sometimes called enteric fever, because it causes local affections in the bowels. It is in our times the great scourge of armies, especially in war-time. In this country it is most prevalent in the

autumn of the year and wet seasons. When one case is caught from another, a period of 10 to 14 days elapses before the onset of symptoms. This is called the incubation period of the disease. It is slow in developing, unseen and generally unsuspected. It is a disease attended by a form of fever, continuous, but generally not of a violent type.

The ailment begins with a period of debility and languor, with loss of appetite and nausea, then follow headache, chills, thirst, and pains in the back and limbs, with a tendency to diarrhea without much colic pain; about two degrees of fever in the mornings and three to four degrees in the evenings. The patient is restless, and often sleepless. This fever may continue for three weeks, and in such cases the weakness becomes extreme, the tongue dry and brown, and there may be extreme diarrhea, and even blood may be passed, which comes from ulcerations of the bowels. In a considerable number of cases there is a slight rash of pink dots on the skin of the chest and body. These rosy spots are most noticeable on the belly, and come out in crops, some fading while others are appearing. These symptoms may gradually pass off, and recovery will follow, but in severe cases they lead on to fatal exhaustion, accompanied by delirium, insensibility, and convulsions. No drug has any power to cure the disease, and the doctor can only give medicines to relieve serious symptoms as they arise.

But it is useless to attempt to treat the disease without medical aid. It has been well studied and is well understood. A large proportion of all cases recover. The chief hope of the patient is in the excellence of the nursing. The nurse must daily examine the "stools" (the matter passed by the bowels), and must be on the look-out for undigested lumps of curdled milk. The diet must be milk (if it agrees), chicken broth, barley water, and so on. Beef tea is not much use, especially as it tends to bring on diarrhea. Alcohol may be needed in the later stages when the heart is weak.

The disease, as we have said, requires real skill and medical treatment; the nurse must have, always ready, broken ice, hot water, castor oil, a water-bed for the patient to lie on; and she must be on the look-out for bedsores, which are very apt to form. (*See "Bedsores."*) Lastly and

most important, she must keep a plentiful supply of *disinfectants* and put some into every stool and every vessel used by the patient. (*See "Infection."*)

Note that no solid food must be given to any typhoid patient till the temperature of the body has been normal for at least a week or ten days. To give solid food otherwise is to kill the patient.

Prevention of Typhoid Fever.—Typhoid fever can be prevented in one of three ways (the three combined are preferable):—

1st. Destroy the infectious agent at its source.

2nd. Destroy the means of transmission.

3rd. Avoid infection.

(1) The infectious agent always proceeds from a case of typhoid fever. Therefore disinfect all secretions and excretions from a typhoid case by the use of freshly slaked lime or chloride of lime. Dispose of these in such a way that they cannot contaminate a water or milk supply. Do not allow utensils or furnishings in a typhoid case's room to be used by anyone else until they have been thoroughly sterilized or disinfected.

Remember there is danger of a "typhoid carrier's" transmitting the disease through excretions a long time after recovery from the disease. Absence of the germ from the excretions can only be determined by a bacteriological examination.

(2) Pasteurize all milk drunk and filter or boil all water. Destroy flies or prevent their breeding. Do not empty raw sewage into water supplies used for drinking or bathing.

(3) Avoid infection by having yourself immunized against typhoid by preventive inoculation. Any first class physician can do this.

Do not drink any but pasteurized milk unless you know its source to be free from danger of typhoid. (Very few are.)

Do not eat any but deep-sea oysters, unless cooked.

Prevent the access of flies to your food.

Do not bathe in sewage-polluted water.

Keep your body in robust condition.

Ulcers.—The common word for ulcer is "sore," and, of course, there are a very great many varieties of sore. (For ulcer of stomach and perforated ulcer, *see* "Stomach Diseases"; ulcer of back, *see* "Bedsores"; ulcerated throat,

see "Sore Throat"; syphilitic ulcer, see "Syphilis"; scrofulous ulcer, see "Tubercle" and "Consumption"; eczematous ulcer, see "Eczema.") The treatment of every different type of ulcer is different, and this fact makes it necessary for us to *describe* each of the more common kinds of ulcer, so that the reader may know what sort of ulcer he has before he begins to treat it. We hope that these remarks will be of the highest value to our poorer readers who suffer so much from ulcerated legs, who grudge the money that the advice of a good medical man naturally costs, and who are too apt to waste their money in buying ointments which are said to cure all ulcerated legs! No one ointment can possibly be good for all the different kinds of ulcers, and some ulcers want no ointment at all.

(1) The *Healthy ulcer*.—The skin round it is not swollen or boggy, or discolored; there is no change in it beyond a ring of pinkness immediately round the sore. The edges of the sore are rounded, shelving gently down to the sore, and are opaque white at the very margin, bluish nearer to the middle and dark red at the center of the sore. The discharge, if any, is like white of egg in appearance. There is no pain, no tenderness. It is the object of our treatment to bring all ulcers to this condition.

Treatment.—Rest, and any cleanly dressing are all that are needed. The ulcer will heal of itself in good time.

Now with regard to REST, we must say that it is the most important thing of all in the treatment of every kind of ulcer. Few people will take to bed for the sake of healing a small sore which is giving little trouble, but many a woman's whole life's misery would have been saved if she had only treated her ulcerated leg with rest in bed while it was not a serious matter! By those who can afford a proper surgical dressing for the ulcer, the following instructions may be followed:—A piece of perfectly clean lint, exactly the size of the sore, is moistened with a concentrated solution of boric acid and laid on the ulcer. It is covered with a piece of oiled silk which overlaps the lint all round; uniform pressure is applied by a bandage and the dressing is changed once a day.

Whatever mode of treatment be adopted for an ulcer on the leg, rest in bed, with the limb raised, has more influence than any other condition in hastening the cure.

Sometimes, even in a healthy ulcer, there is so much loss

of tissue, that if we are to wait "until it skins over" we shall have to wait a very long time. In these cases surgeons *graft* some flakes of skin from other parts of the body, and the transplanted skin grows well in its new situation.

(2) The *weak ulcer*.—This is often the result of too much watery poulticing. The edges are not definite and the ulcer has no opalescent blue ring like the healing ulcer has. The granulations (the pinkish granular flesh of the sore) are pale, flabby and exuberant, and have a watery discharge. Old nurses call the ulcer "proud flesh."

Treatment.—This is, in one word, stimulation. The patient wants nourishing food, rest in bed, pure air, and a tonic. The ulcer has to be dressed often, washed with *red wash*, and a little piece of lint the same size as the ulcer is to be dipped in the wash and always kept on the ulcer. The flabby, pale little granules are to be *lightly* touched with a stick of lunar caustic from time to time.

(3) The *callous or indolent ulcer*.—The edges of this ulcer are raised, irregular and hard. The surrounding skin is hard, discolored, and brownish-red and brawny. The surface of the sore is smooth and yellowish, and there are no granulations because there is no healing going on. Such ulcers are seen mostly on the outer side of the leg, between the ankle and the calf, in persons of middle age. They are painless, and callous, and not tender to the touch.

Treatment.—First, of all, try the pressure method. Apply a Martin's india-rubber bandage to the ulcer, without any dressing, every morning before getting out of bed; keep it on all day, wearing it not *too* tightly. At bedtime, wash the ulcer with warm water (using a piece of cotton wool or rag—*never* use a sponge in surgery!) and put over the ulcer a pad of lint soaked in rectified spirit, and apply an ordinary calico bandage. The india-rubber bandage ought to be dipped or kept in some disinfectant during the night.

If this plan of treatment does not bring the ulcer into a healthy condition a surgeon must be called, to strap it, or to incise it. There remains, however, one of Unna's methods of treating these ulcers; it is this:—Paint the ulcer itself and all the surrounding skin with Unna zinc-ichthyol gelatin, cover the whole with clean lint, bandage it and leave it three days, and then renew the treatment.

(4) The *irritable ulcer*.—This is commonest in elderly

people and is generally situated behind the ankle. The surrounding skin is often purplish, hard, and discolored. The edges of the ulcer are raised and irregular. The sore itself is dark red or covered with a "slough," and a thin scanty discharge issues from it. The *pain* of it is terrible and keeps the patient awake at night, bringing him to a severe condition of exhaustion. The sore is acutely tender to the touch. Absolute rest in bed is the first essential. The bowels must be moved occasionally with half-a-drop of croton oil swallowed in a bread-crumble pill. During the day, if the ulcer is very painful, let the sufferer take five grains of antipyrin and thirty grains of bicarbonate of soda, four-hourly. At night, to procure sleep, some form of opium will probably be necessary, but it must be prescribed to suit the special case by a doctor.

The *treatment* of the ulcer itself is not easy. A good plan is to paint it over with a 10 per cent. solution of cocaine; ten minutes later, to rub it gently all over with lunar caustic so as to form a slough; and then to dress it with boric acid ointment on lint. After a day or two the slough separates and comes away, and a healthy sore ought to remain, which is treated as under (1). If the ulcer does not look healthy yet, this plan may be repeated.

(5) The *inflamed ulcer*.—This is the sort of ulcer that drunkards are especially liable to have. The surrounding skin is red, swollen, hot and tender. Note, that *any* ulcer may become an "inflamed" one, if neglected. The edges are sharply cut. The sore itself is generally covered with a slough, and there is a blood-stained discharge from it. Or it may be quite dry and covered with a scab.

Treatment.—The patient will be all the better for a good purging, and he may have to be treated for gout. After two grains of calomel at bedtime, the patient should take, next day, three times during the day, a drachm of Epsom salts in an ounce of infusion of quassia. Very hot fomentations made with boric lint and sprinkled with a few drops of laudanum, make very good local applications to the sore. But the important things in the treatment of these ulcers are *rest in bed*, abstinence from alcohol, and purging.

(6) *Varicose ulcer*.—These are very common among middle-aged and elderly women of the poorer class. The patient has varicose veins, and as a result of them, the skin of the leg, somewhere between the calf and the ankle, be-

comes badly nourished, purplish in color, and shiny in appearance. Such shiny, discolored skin is very easily damaged by very slight injuries and a sore is very liable to form. This sore as it spreads is all too likely to eat into one of the dilated twisting varicose veins; and at any time, in a few seconds, the patient may lose as much as a pint of blood (*see* "Bleeding from Varicose Veins").

Treatment.—No local treatment will be of much good until the *pressure* of the column of blood in the dilated veins is taken off the part where the ulcer is. This must be done by wearing an elastic stocking or elastic bandage during the daytime. At night, hazeline ointment may be applied on lint to the sore. But the only radical treatment is by operation on the varicose veins which are causing the trouble.

Urinary Troubles.—The troubles connected with the passing of water from the body may be described under two main headings:—

A.—*Incontinence of urine.*—Inability to hold water in the bladder—

(1) True incontinence is caused by paralysis of the muscle, called the sphincter, which lies at the entrance to the bladder. This paralysis is probably caused by spinal cord disease or injury and may or may not be curable.

(2) Incontinence occurs in men sometimes as the result of sexual excesses. Rest and tonics and wholesome living will cure it.

(3) Hysterical incontinence occurs in young girls sometimes.

(4) Nocturnal or night incontinence, or bed-wetting, occurs in children of all ages; it may be due to a long foreskin, which requires circumcision, or to a stone in the bladder, or to bad bringing up. (*See* No. 7.)

(5) False incontinence is the word used to express the overflow from an over-full bladder in a paralyzed patient.

(6) Women after childbirth sometimes cannot hold their water because of the bruising of the parts during the delivery of the child.

(7) Epileptic attacks are often accompanied by the dribbling away of urine. Many epileptic children wet

the bed without knowing it, and ought to be treated for epilepsy.

(8) *Fright* sometimes causes a child to wet the bed.

B.—*Retention of urine*.—This means a condition in which the patient *cannot* pass his water though the bladder is quite full. It is a very painful affection. It may be due either to some obstruction or to paralysis of the bladder—

(1) In old men the obstruction may be an enlarged prostate gland. This is often relievable, but hardly curable.

(2) In adult men, the obstruction may be a *stricture*; congestion, due to gout; a little stone lodged in the passage.

(3) In children, the foreskin may be too tight to allow the water to pass freely.

(4) In women, a tumor in the abdomen, or the head of a yet unborn child may press upon the passage and prevent the passing of the urine.

C.—*Frequent desire to pass water*.—This may occur in one of two different sets of circumstances. Some people are always wanting to urinate because their bladder seems to be always full, and in fact, does fill up very quickly. This occurs with—

(1) Diabetes.

(2) Chronic Bright's disease.

(3) Hysteria in women.

(4) Chronic drunkards.

Other people are continually wanting to pass water because the bladder is so irritable that it will not tolerate the presence of even a few drops of water in it. This occurs in—

(1) Inflammation of the bladder.

(2) Inflamed prostate gland.

(3) Enlarged prostate gland (in old men chiefly).

(4) A stone in kidney or bladder.

D.—*Deposits in urine*.—The man who worries himself about his health so much as to look at his tongue in the

glass every morning, and to examine the color of his urine, often frightens himself quite unnecessarily. The deposits which may be seen in the urine are very numerous, and most of them indicate something seriously wrong with the individual. But there are other deposits which are less important, or unimportant and far more common. Quite normal, healthy urine is clear and amber-colored when passed. But urine may be turbid when passed, and that turbidity is generally caused by eating too much meat, or by a little catarrh of the bladder caused by catching cold. After a heavy meal there is sometimes a brick-dust sort of deposit, reddish-yellow, pink, or red. It is of no importance, but suggests that you have been eating too much meat, or that you have a bad cold, or that you are feverish.

In short, a little knowledge of the urine is really a dangerous thing to all who are unduly nervous. The only good reason for examining the urine passed is to enable you to report it truly to the doctor, and not to enable you to doctor yourself without understanding the subject.

Vaccination.—We of to-day little realize how enormous the destruction of life from smallpox was up to a hundred years ago when control was obtained over it by means of the process known as vaccination.

During the 18th century 60,000,000 of the inhabitants of Europe died from smallpox and there were few who escaped having the disease some time during their life.

Since the introduction of vaccination the reduction of the amount of smallpox has been so great that there can be no doubt of its infinite value.

The death rate in Sweden per million has been reduced from 2,050 before the vaccination era to 2 in 1894. In 1897 there were only 5 deaths from smallpox in the entire German Empire of 54,000,000 people. In Russia, where vaccination is neglected, there are still over 50,000 cases a year.

If a person is vaccinated in infancy and again at the end of childhood he is practically safe from smallpox. He is absolutely safe if he is revaccinated every ten years.

There is no danger from vaccination. The vaccine is now manufactured in an absolutely pure condition and there is no possibility of contracting any disease through vaccination. The reaction is slight and never lasts more than a day or two.

Every child should be compelled to be vaccinated before one year of age and again when a pupil of a private or public school at 9 or 10 years of age.

We should not be lulled into a sense of false security by the practical absence of smallpox in this country at the present time. If we should relax our precautions and discontinue vaccination smallpox would soon become almost as common now as it was 100 years ago.

The disfigurement of the face from smallpox known as pock marking or pitting is permanent. Without vaccination you can never feel that you are free from this danger.

Vaccination is a very simple procedure; but should be done by a physician.

Varicella.—This is the medical name of *chickenpox* (which *see*). Chickenpox and smallpox (*variola*) are quite distinct diseases, because chickenpox occurs in children whether vaccinated or not, and an attack of it does not protect from smallpox.

Varicocele.—A varicocele is a little bunch of dilated and knotted veins in the “purse” or scrotum of a man. *It is the result and not the cause* of that “loss of manly vigor,” that “diminished sexual power,” and that “debility,” which figure so largely in the advertisements relating to the cure of varicocele. We beg to remind our readers that no registered doctor, surgeon, or physician in America is allowed to advertise, and that if he does so, he runs a risk of losing his position as a member of the honorable faculty of medicine.

The youth, then, who, as the result of fast living or bad habits, begins to wonder why he is weak and wretched is only too apt to believe advertisements when they tell him that *varicocele* is at the root of all his trouble, and that the cure or removal of the varicocele will restore all his power. *That is not true.* Restoration of virility and manliness will take place at once (though slowly), on the resumption of a clean mode of life—early hours, hard work, and not too much food. The varicocele may or may not be cured. It is not half as dangerous, even when it is large, as a varicose vein of the leg, which may ulcerate and bleed you to death!

We now come to the surgery of this subject.

A *varicocele* is a little bunch of twisted and knotted veins inside the scrotum, or fleshy bag which contains the testi-

cles. The swelling may be very small, or so large as to be a nuisance. It is greater when the man stands up, and gets smaller when he lies down. It increases for a time after coughing or exertion. Sometimes it may be complicated by a "rupture" or hernia, and for that reason no young man ought to bother himself about his varicocele or buy bandages for its treatment until he has consulted a surgeon, who will tell him exactly what is wrong. If only young men would go to respectable family doctors and ask about all private natural matters which they don't understand, how much heart-burning might be saved! Sometimes a varicocele is attended with a sensation of weight and aching, especially if it is large and unsupported by a bandage. Sometimes the neuralgic pain of it is very great. Occasionally, but *rarely*, a vein "bursts," and the scrotum fills up with blood.

Treatment.—There are two ways of treating a varicocele, if, indeed, it is large enough to cause any annoyance. One is the *palliative* treatment. This consists in attending to the general health by tonics and exercise and by living a cleaner and more moral life, and by wearing a suspensory bandage which supports the varicocele and soon relieves the pains, and by bathing the parts with cold water night and morning. The other way of treating a varicocele is the *radical* method. This consists of a little surgical operation for the tying, or tying and removal of the whole bunch of enlarged veins. The little operation is free from danger and is done quite painlessly. The testicle is not touched or in any way damaged, and it does not waste away afterwards, except in a few cases when it was already wasting from a poor blood supply. But even if the testicle of the left side (and varicocele is nearly always on the left side) does waste away, there is still one left; and a man is just as well able to procreate children with one as with two. These remarks will be appreciated by all those who are continually sending letters to the medical editors of papers asking for information on these subjects.

The circumstances for which radical cure of a varicocele is generally undertaken are these:—

1. When the existence of a varicocele disqualifies a man for admission to the public services.
2. Great discomfort and neuralgic pain from a very large varicocele.

3. Those cases of young, well-educated and sedentary men, who worry about themselves, fidget about the local condition which they can see and feel for themselves, and suffer from amorous dreams and uncomfortable sensations.

Varicose Ulcer.—Many people have varicose veins of the legs, especially women who have borne many children. Sometimes a vein, if unsupported by an elastic stocking, gives way and bleeds. When the bleeding has been stopped, a little sore remains which is all too apt to become a regular chronic ulcer of the leg. Rest in bed is the first essential. (See "Ulcers.")

Varicose Veins.—This name is applied to a dilated and tortuous condition of the veins, most common in the legs, and usually due to long standing, severe muscular exertion, pressure from a tumor or some intra-abdominal condition, or an organic affection of the heart. Hereditary disease such as gout may predispose to this condition by a weakening of the walls of the veins.

The appearance of the tortuous vein meandering up the leg cannot be mistaken.

It is usually accompanied by a feeling of fatigue and a sense of fullness of the limb after exercise or long standing.

The circulation may become so poor that the tissues become poorly nourished, congested, inflamed (varicose eczema), or may die, producing a varicose ulcer. These complications are usually intractable and require the help of a physician to heal.

The palliative treatment of a varicose vein consists in supporting it by an elastic stocking and reducing the hours of standing.

The radical treatment consists in the excision of a greater or less portion of the dilated vein with ligation—to force the blood back through the deeper veins of the leg. The radical method is recommended in aggravated cases or cases with intractable ulcers or eczema.

Vegetarianism.—Real vegetarian diet consists only of fruits, nuts and vegetable produce of every kind. There are few real vegetarians because they very soon discover that to take enough vegetarian diet to work upon, they need absurdly large quantities of it. Moreover, vegetables all contain a very high percentage of *water* in their composition, and sooner or later the bowels get out of order.

A rational and altogether satisfactory diet (from the health point of view) is the modified vegetarian diet—that is, one which admits *eggs*, *milk* and *cheese* in moderation. This fleshless diet is, of course, not a purely vegetarian one; for eggs and milk are highly concentrated *animal* foods. But there is no doubt that thousands of us would be all the better if we ate *no flesh*. The man who eats no meat or very little meat, soon gets to care very little for alcoholic drinks, and soon finds that his pocket benefits, and that his health is better. It is the “fumes” of a flesh diet which give rise to thirst; and the large amount of waste matter in flesh food and the difficulty of getting rid of it by the kidneys are the causes of the craving for stimulants. It is not to be expected that people will give up their joints of roast beef; and perhaps the nation would lose much of its fighting propensity if they did. But, nevertheless, the middle-aged man who wants to feel young still, who wants to avoid rheumatic pains and gouty attacks, and who doesn’t want to be a soldier, or to take part in any amusements which depend upon brute strength and animal powers, may do much worse than restrict his animal diet, or do without flesh altogether. The acid properties of a half-pound of fillet of beef, washed down with a pint of beer, make a man feel at peace with the world and send him (where possible) to the armchair for a smoke and *another* glass of stimulant. But if he is middle-aged, and especially if he has no *manual labor* to do, he has eaten a meal far in excess of his requirements, and of a nature different from that which he needs for brain work. It is lucky for him if years of this kind of “solid feeding” don’t provide a future for him of gout, rheumatism or apoplexy! This doctrine is not as “cranky” as some may suppose. We do not find fault with the hearty meals of the youth who has to work and play hard. But we strenuously maintain that brain-workers and business men would drink less, work harder, and be more clear-headed on a fleshless diet than on either a full-flesh or a vegetarian diet. The experiment, in any case, would not only cost a man nothing, but would save money for him, for meat is an expensive item; and the experimenter would find himself fresh and brisk in the mornings, indifferent to continual and stupid “liquoring-up,” and free from most of the aches and pains that we call rheumatic. *Age*, *sex* and *occupation*, of course,

produce great variations in our food requirements. Persons much exposed to the weather require fats and sugars and starches. Children require much meat, or, rather, milk, eggs and cheese; whereas old people, if they want to live long, will have to eat sparingly, especially of animal foods. In conclusion, we recommend to the notice of all our middle-aged and elderly readers the wise little book of Sir Henry Thompson, entitled *Diet in Relation to Age and Activity*, which can be ordered through any bookseller. It is not a work on vegetarianism, however.

Venereal Diseases.—(See also “Syphilis” and “Gonorrhea.”)—Until very recently it has not been realized what a vast amount of venereal disease there is in this country. One reason has been because these diseases, syphilis and gonorrhea, rarely appear in our mortality statistics and because we have never taken the trouble to tabulate the simple cases. But many of these cases produce more serious conditions and it is by determining the results of these diseases that we know how abundant they must be and what enormous damage they are doing.

Syphilis is a cause of a large part of the following fatal diseases:—General paralysis, locomotor ataxia, paraplegia, softening of the brain, arteriosclerosis, aneurism and still births.

Gonorrhea is responsible for 80 per cent. of the deaths due to inflammatory diseases peculiar to women. It is the cause of many of the cases of rheumatism and most of the cases of blindness in infancy.

These diseases are sometimes contracted innocently—as, e. g., an innocent wife from a “fast” husband; but most of them come as the direct result of immorality.

It is doubtful whether laws will ever aid much in controlling this evil.

It is certain, however, that moral teaching can do much—especially when backed up by the facts of what suffering, sorrow, and disease may result from a departure from moral methods of living. It is a question how old children should be before they are educated on the “social evil”; but such education should certainly be given before a child is sent off to school or college, or freed from home restraints.

If syphilis or gonorrhea should ever be contracted by anyone they should place themselves at the earliest possible

moment under the care of a physician and absolutely avoid all possibility of transmitting the disease until they have been pronounced cured and free from infection.

Ventilation.—The idea of human beings living steeped in their own excretions is not a pleasant one to dwell upon; yet this is just what countless people in shops and houses are doing when they breathe air not sufficiently renewed by ventilation.

When we realize that there are many buildings in New York City where several thousand people spend their days on a ground area of 100 x 100 feet; that the streets between are narrow and dark and the spaces between are cistern-like and filled with stagnant, lifeless air we can understand the headache, depression, anæmia and impaired health which many of the "sky-scraper" denizens feel.

Of the importance of ventilation we as a nation are as yet almost totally ignorant. We appreciate how much better we all feel out-of-doors, but we don't seem to realize that the reason we feel less well in-doors is because we breathe air which is shut up in rooms inadequately circulated and inadequately renewed.

Ventilation is required to rid the air of its gaseous impurities and the watery vapor which result from the respiration and transpiration of human beings, and to reduce these to such an extent that the air of inhabited rooms shall not be detrimental to health. Solids, as dust, microorganisms, etc., are not removed by the ordinary means used for ventilation, and the circulation of fresh air through an apartment cannot, therefore, take the place of methods of cleaning.

The amount of fresh air required for each person per hour is 3,000 cubic feet. As air cannot be changed comfortably, without producing some feeling of draught, more than three times an hour, each person in a house should have at least 1,000 cubic feet of air space. The legal minimum for shops and factories in most states is 250 cubic feet by day and 400 cubic feet by night. Each gas burner consumes 4 cubic feet of gas per hour and requires 4,800 cubic feet of fresh air an hour. This must be added to the air required by people in a room. Electric lights do not consume any air.

The ideal scheme of ventilation is one in which the air is derived from a pure source some feet above the ground,

washed and filtered free of dust and impurities, given a proper degree of humidity and temperature, forced into each individual room, sucked out through a pipe and expelled out of doors.

This is known as the artificial method of ventilation. The natural method depends upon diffusion, wind, and temperature to cause a circulation of air and is largely a matter of *luck*. Wind and temperature cause warmed air to go up the chimney and it is *hoped* that fresh air to replace this will *get in somehow*.

Diffusion stirs up the air and dilutes the impure air with air not yet used.

The advantages of the artificial over the natural methods are its constancy under all conditions and the facilities which it affords for regulating the source and amount of fresh air, and the preparatory treatment as to temperature, moisture and purification.

In any scheme of ventilation regard must be had to the following practical points:—

1. When air is heated it expands and tends to rise; when air is cooled it contracts and tends to fall.

2. The inlet provision for fresh air should average 24 square inches for each individual; the provision of inlet areas somewhat larger than those of exit tends to immunize draughts.

3. Inlets should be low in the room and incoming air should be directed upwards if cold and downwards if warm.

4. There is a tendency for fresh air to take a direct course to the outlets, and this must be counterbalanced by a judicious selection of the relative positions of inlets and outlets.

5. With less than 250 cubic feet of space per head, no ventilation can be satisfactory which is not aided by mechanical force.

6. The source of the incoming air should be considered. It should not be borrowed from adjoining rooms, but taken direct from the outside.

7. If warmed air is forced into a room, it should only be raised to a temperature sufficient to prevent a feeling of cold (about 60° F.). More highly heated air is often felt to be overdry and unpleasant.

8. Mechanical methods of ventilation are essential in all office and public buildings, factories and theaters. It

is advisable in all apartment houses and homes unless the expense of installation and maintenance is prohibitory.

Warts.—Everybody knows what a wart is, but everybody does not know that a wart is something between a mere thickening of the skin and a cancerous tumor. A cancer growing from the skin (called an *epithelioma*) is practically a wart of a certain type—a wart which, if left alone, will at last ulcerate, cause swollen cancerous glands in the armpit and perhaps, also, cancerous growths in internal organs such as the womb or liver. Of course, most warts are, and probably will always remain harmless; but as no one can tell exactly whether a wart is going to become cancerous or not, it is always worth while to get it removed.

Children's warts are found chiefly on the fingers or knuckles, and are tough, flat, circular knobs of hardened skin, ingrained with brownish dirt, and apt to bleed if the topmost layer of skin is knocked off. They may come in crops whenever the child is a little out of health. They can be destroyed by caustics such as ethylate of soda, lunar caustic, nitric acid pure, or caustic potash. A little of the caustic is applied daily, from the end of a wooden match, care being taken to touch only the wart and not the skin surrounding, and to let it dry on. Little by little the tough hard skin shreds off and the wart is gone. A little lime water taken after food daily is said to assist in causing warts to disappear. Sea water has also been used.

Pigmented warts.—Colored warts are the ones which should certainly be removed, for they are always apt to grow into malignant tumors as the person gets on in years.

Tuberculous warts are common on the hands of students, post-mortem room porters and funeral officials. They must be cut out by a surgeon.

Cancer developing from a wart is of very rare occurrence before middle age. About that time (say 45) and after, the continual smoking of a hot-stemmed clay pipe is apt to cause cancer of the lip. Chimney sweeps are liable to cancerous warts of the skin on the scrotum, caused by the irritation of soot, and by lack of cleanliness. The continual drinking of bad spirits certainly makes a man more liable to cancer of the stomach.

Note.—Neither warts nor cancers are easily caught by one person from another. But there is something in the idea that the blood of a wart will sometimes produce another

wart if rubbed on healthy skin. And as to cancers, it is undeniable that there are houses in which person after person, for generations, gets the disease from merely living in them. Such are called "cancer houses," and ought to be avoided. It has also been noticed that the husband of a wife with cancer of the womb, or the breasts, frequently develops cancer himself later on.

Water.—There is no greater necessity of life than an ample supply of pure water, especially for drinking purposes. But the amount we drink is very small compared to the amount which must be provided per head for the inhabitants of a town. Allowance has to be made for ordinary washing and personal cleanliness, for the baths and domestic washing, for closets and for cooking, and for street cleansing and for use in gardens.

In some towns sea water is used in the streets and for the sewers, and in many places rain water is used for washing. In solitary cottages and small villages water is generally obtained from shallow wells, and this supply may be pure enough for use when the population is small and scattered. Shallow wells are, however, very liable to pollution from surface drainage, and from this reason the water may be seriously contaminated. As villages grow into towns a supply of drinking water has to be fetched from hills at a distance, and conveyed through canals or underground pipes. In some districts it is found possible to obtain a supply of water by boring very deeply with iron pipes in short lengths until a water-bearing stratum is reached; these are called artesian wells. Such water is generally very pure, but may be too hard. A water is said to be hard when it has dissolved in it too much lime absorbed from the soil. Sea water is useless for drinking or for domestic use, being too salt.

Rain water, although very pure, if collected away among mountains or very far from dwellings, is both dirty and impure when collected in towns. The air of towns is contaminated with carbonic acid and sulphur, dust of a thousand sorts, emanations from the skin and germs of infection, and rain in falling through it becomes dirty, impure, and unfit to drink.

All towns now have a public water supply. This may be of two sorts—one in which the pipes supplying each street and house are kept constantly full of water, under full

pressure, at all hours; and on the other mode of supply each house has to have a tank for storing water, because the supply under pressure is only turned on for an hour or two each day. This latter plan is more common than the first, which is better. Under the constant supply more water runs to waste, but with the occasional system there is always a risk to health from cisterns which may be kept in a dirty state or may get rubbish thrown into them.

Unless a person has seen a drop of dirty water exhibited under a microscope, it is difficult to believe what a collection of very minute living beings may be contained in it. Many of these are, no doubt, harmless, but, on the other hand, many are germs of different diseases. These microscopic germs, bacteria, and bacilli multiply with amazing rapidity, especially in water which lies stagnant.

They get into the water from the rain, or from the soil through which the water has run, and may fall into the water in our cisterns if not well covered. Many diseases are known to be spread by water containing the special germs of the disease, and this is especially the case with typhoid fever. Slops may be thrown away in gardens, or sewage from infected houses may soak through the ground and find its way into the water of shallow wells, and so one case may lead to the occurrence of many other cases. In this way typhoid fever is always common among soldiers in camps, especially during war time, when it is so difficult to secure sanitary conditions. In a war typhoid fever always kills more men than the guns of the enemy. Drinking water kept in tanks may be wholesome enough if great care is taken to keep tanks clean and covered, and if a full supply is added daily, while a certain amount is drawn away every day for use. But in poor districts it is always found to be very difficult for landlords to keep the cisterns clean. Of course, many landlords are very careless, and pay but little attention to the needs of poor tenants; and when a landlord does his best, poor tenants are apt to be grossly careless and dirty in their habits. They leave covers off, or let children play in the tanks, and but rarely watch that the water in them is clean. Cisterns are often badly situated in dwelling houses; they should be as far as possible from the closets, and should be placed so as to be frequently inspected; they should be scrubbed out at least every three months. Pure, wholesome water should

be clear, sparkling, and colorless, without the faintest smell or taste, and should not be too hard with dissolved lime. Impure water sets up diarrheal colic, sore throat, nausea, and loss of appetite. Life is never safe without a pure water supply.

Water Purification.—So many of the infectious diseases may be contracted through a polluted water supply that it is advisable as a routine measure to avoid all chance of contracting disease in this way by drinking only water which has been purified.

Some city water supplies are filtered before being distributed.

Others are not. Whether the city water is filtered or not, home measures for purification are advisable.

The chief measures for purification are—boiling, filtration, distillation and chemical treatment.

Boiling destroys bacteria and removes temporary hardness. This is one of the safest ways of purifying water, but it may taste flat unless the air which has been removed by boiling is replaced by aëration.

Distillation is the most universally applicable mode of purification, and even sea water can be utilized in this way.

The process of distillation is a slow one, however, and the water may taste flat from want of natural salts and air.

Filtration is a very good method of home water purification provided good filters are used and kept in good order.

The best filters are the Berkefeld and the Pasteur-Chamberland, which can be applied to the water tap.

Every few days the filter-candle should be removed from these filters, and thoroughly scrubbed and boiled before being replaced.

Chemical processes are used, for the most part, in the removal of inorganic impurities—especially lime. This is best done in connection with filtration, and many large filters are provided with an arrangement by which the lime is precipitated out of the water as it passes through the filter by means of alum.

The purest water supplies are those which come originally from mountain springs, deep-driven wells and properly-filtered city water.

Water Brash is a clear alkaline fluid, much like saliva (or spittle) in appearance, which comes into the mouth in gushes, and has to be spat out, generally in the early morn-

ing. Sometimes it comes up without any trouble, sometimes it is vomited up with painful retching. It is actually spittle, from the mouth, which has been swallowed during the night and comes up again in the morning. It is a sign of chronic inflammation of the stomach, and is probably caused by over-indulgence in alcoholic liquors. (*See also* "Indigestion.")

Watercress AND ITS DANGERS.—If watercress is grown in a stream of clear water it is a most valuable salad, and is well suited for eating with bread and butter at meals when tea is drunk. It is very purifying to the blood, containing potash with vegetable acids. There is, however, a risk of being infected with typhoid fever, and, perhaps, also, of swallowing the eggs of worms which may breed in the bowels, if the water is foul, stagnant or has become soiled with sewage materials draining from the fields or gutters. All watercress should be pulled to pieces and thoroughly washed by water running from a tap, or with several lots of water in a bowl.

Water-on-the-Brain.—This is the popular name for *meningitis*, or inflammation of the membranes of the brain, called in novels, "brain-fever." It is generally due to tuberculous disease. Children are sometimes born with water-on-the-brain, which has swelled up their heads, and which crushes their brains and makes them more or less idiotic.

Weir-Mitchell Treatment.—This is an expensive treatment for neurasthenia (which *see*). It consists of complete rest in bed, without letters or newspapers, or worrying visitors; overfeeding and massage to take the place of muscular exercise. The patient is allowed to see no one except the doctor and the nurse. It is a splendid treatment for exhaustion and brain-fag.

Wens.—A wen is a cyst of the skin caused by blockage of the mouth of a little gland; it is full of a cheesy substance called *sebum*, and occurs commonly on the scalp or neck. Doctors call wens *sebaceous cysts*. They are round, dome-like, semi-fluid tumors, but quite harmless. They may be easily removed under cocaine without pain, by any surgeon.

White Leg.—A swelling of the whole of one leg, occurring, sometimes, in women after childbirth, also in convalescence from pneumonia or typhoid fever.

Symptoms.—For a few days, pain and tenderness of one

thigh, and feverishness. The limb swells slowly, and in a few days will be very white, hard, and shining, like a hard bolster in a white pillowslip. The veins can be felt as hard as whipcord down the leg. The swelling begins to go down again in about ten days and the leg may recover altogether. But very often some degree of weakness and aching remain in the leg for months or years.

Treatment.—Rest in bed, and quiet, with the limb raised on a pillow. At the onset, give the patient a pill containing two grains of quinine and $\frac{1}{4}$ grain of opium every six hours. But before that, administer a sharp purge like a drachm or more of compound jalap powder. Do not move the leg about, or poultice it, or rub it; everything depends on its being kept still. Every time it is moved there is a risk that a piece of blood clot from one of the inflamed veins may be dislodged and carried by the blood stream to some distant part, such as the brain or lungs, and cause frightful damage, or even death. This mischief is called *embolism*.

White Swelling.—This is the name given to tuberculous disease of a joint, especially of the knee, but it should not be used by those who care for accuracy.

Whitlow.—This is a name given to almost any kind of inflammation of the fingers. The inflammation is caused by a germ or a mixture of different germs, which get into the blood through any crack or tiny sore on the fingers, especially at the edge of the nails.

Symptoms.—Throbbing pain in a finger, made worse by hanging the hand down, relieved by raising the arm. Swelling and redness and tenderness and pain, especially at one spot.

In the least severe kind of whitlow the skin rises like a blister over it and then, if the blister be pricked or cut, matter will escape and the whitlow will soon be well. The second and more severe type is when the inflammation is right in the soft pulp of the flesh of the finger, especially likely to occur after getting a splinter into the finger. This kind of whitlow is to be continuously fomented or held in hot water. Presently the matter comes to the surface, bursts through, and the inflammation gradually subsides. The third and really serious kind of whitlow may develop from the others if they are neglected. The inflammation goes right down to the tendon of the finger, gives intense

pain, swelling and tenderness all up the arm, swollen glands in the armpit and a general feeling of illness. If neglected, this whitlow may cause loss of a finger, or even of a hand or arm. The treatment must be left to the skill of a surgeon.

Whooping Cough.—This is a very contagious disease, which attacks children so readily that very few children grow up without suffering from it. The infection of the disease seems to be in the air, and we suppose that the out-breathed air and the phlegm of those who are suffering from it spread the poison which starts other cases, but as yet the scientific observers, with their microscopes, have not been able to discover any definite germs. The disease occasionally appears as an epidemic, attacking a large number at once in the same locality, but, in general, each new case is infected separately from a previous case. For example, a child may get the infection from sitting in an omnibus opposite to a child who has a severe fit of the cough. Whooping cough is called *Pertussis* by doctors, and an old English name was *Chin-cough*. It rarely occurs more than once to anyone.

It generally begins as a common cold, passing on to a cough, with a little feverishness; and then after a week or more, the cough changes its character; it tends more and more to come on in fits of coughing, with free intervals. There may be only two or three fits of coughing in a day, or as many in an hour. The cough develops a peculiar quality of a shrill sound or whoop, which, once recognized, is hardly ever mistaken. It occurs at the end of a fit of coughing, when the patient is almost strangled by the length of time the cough has lasted. These coughing fits may end in vomiting or in nose-bleeding, and a child suffers so much in them that he dreads each onset. Directly after a fit, however, the patient seems to regain courage, and if sickness has occurred, he soon gets hungry again. Cases generally last three weeks, but children may continue to whoop for three months. It is a very disagreeable disease for nurses and patients, but its great dangers lie in the complications which are so apt to develop. Measles occasionally occurs with whooping cough, and makes the child even more ill, and increases the danger. Bronchitis and pleurisy, and also pneumonia and congestion of the lungs, are the most common and most dangerous diseases which ac-

company whooping cough, and when there are any symptoms of either of these, medical aid must be sought for at once. The severe cough is also liable to injure the ears, and may cause bleeding behind the whites of the eyes; and even convulsions are occasionally set up, and cause great danger.

Treatment.—Isolation is the first question to be dealt with. As the disease will last for eight to ten weeks or more, it is no use to begin a system in a half-hearted way. If possible, where there is more than one child in a house, the sick one should be sent away; and if he is too sick, then the other children must be sent away. The child ought really to have two rooms to use, but in any case, from the rooms which it uses everything that can be damaged by disinfectants must be removed, because the rooms will have to be disinfected afterwards. The child must be warmly clothed, but must have plenty of fresh air and not be coddled. When we come to mention medicines we find ourselves in a fix: there are so many different ways of treating the disease. We always discountenance the treatment of a disease which may be so serious as whooping cough, without a doctor, and we know that most doctors have their routine way of dealing with it. Yet a few remarks may be useful. The disease generally runs its course; very little can be done with medicines, and a great deal can be done by good nursing. The following is a very good prescription for a two-year-old child with whooping cough:—Phenazonum, 1 drachm; ammonium and sodium bromides, of each 1 drachm; syrup of chloral, 6 drachms; chloroform water to 4 ounces. Give a teaspoonful every three hours. *Caution.*—This contains poisons and must be given only in *measured* doses.

Additional recipes for use in whooping cough:—

(1) *Yeo's inhalation method* of treating whooping cough. An iron dripping-spoon is kept on the fire and carbolic acid is dropped on to it and evaporated until the air of the room is full of carbolic fumes. The throat of the child to be painted with glycerin of carbolic acid. The following lotion to be sprayed in front of the child's face (with eyes shut) from time to time—Glycerin of carbolic acid, 1 drachm; bicarbonate soda, 10 grains; hot water, 1 ounce.

(2) Instead of carbolic, eucalyptus or terebene may be used.

(3) Resorcin (2 per cent.) solution may be both sprayed into the room and painted in the throat.

(4) Ipecacuanha wine, 4 fluid drachms; ammonium bromide, 3 drachms; paregoric, 4 fluid drachms; syrup of tolu, 1 fluid ounce; chloroform water, to 4 fluid ounces. A child of seven years may be given a teaspoonful of this in a wineglassful of water three times a day. A good prescription.

(5) Another useful one is:—Ammonium chloride, 25 grains; bicarbonate of soda, 40 grains; sodium benzoate, 70 grains; chloroform water, 1 fluid ounce; anise water, to 3 fluid ounces. A teaspoonful may be given to a child of four, every four hours.

Winter-Cough.—There is no cough peculiar to the winter. This name means chronic bronchitis, which is worse in the cold and damp weather and better in the warm weather. (See "Cough" and "Bronchitis.")

Worms.—Under this heading we describe briefly the principal worms which are sometimes found in the bodies of human beings, especially in the bowels of children.

The **TAPEWORM** is a flat, long worm, whitish, like a piece of tape and consisting of a tiny *head*, with suckers which enable the worm to attach itself to the inside lining of the bowel and to draw its nourishment from thence; a thin tapering *neck* like a piece of white thread; and a long *body* of several separate segments or divisions. The body may be as long as a yard or more, and the whole worm lies coiled up in the bowel. Bits of it get broken off from time to time, and appear in the motions, but so long as the head holds fast, the worm does not die, but keeps on adding segments to itself.

Cause.—The tapeworms are taken into the body by eating the flesh of pigs or cattle which have harbored them. Pork with worms in it is called "measly pork," and is not uncommon among the poorer class of butchers' shops. There is a little tapeworm also, which is sometimes caught from pet dogs. The dog picks up garbage and rubs its nose in the filth of the gutter and then may communicate worms to anyone who allows it to lick his face or touch his food.

Signs of worms.—Children with tapeworm generally have

enormous appetites, diarrhea alternating with costiveness, headaches and even fits or convulsions. From time to time you can see several inches or feet of tapeworm in the motions.

Treatment.—(1) Keep the child in bed.

(2) Give, for three days, a very spare and light diet and a tabloid or two of cascara sagrada every night. This gets the bowels free from much solid residue of food, and makes the other treatment much more likely to succeed the first time.

(3) On the fourth day, at nine in the morning, give patient a capsule of ten minims of the *extract of male fern*; another similar dose half-an-hour later; another again at ten o'clock. Then, at eleven o'clock, a fluid ounce of *compound senna mixture*, or an ounce of castor oil. When the bowels have acted, give some breakfast. The reason for these repeated doses is that if only a single dose is given it may pass quickly over the worm and fail to kill it.

(4) When the bowels do act, the motion ought to be passed into a bedpan with a piece of black thin crape or cloth over it. Then the white neck and head of the worm may easily be found.

Until the *head* has been found, the cure cannot be considered to have been accomplished. It is very small, hardly bigger than a pin's head.

THREADWORM.—The threadworm is about a quarter of an inch long, white, and threadlike. These worms live in the lower bowel or rectum.

Signs of threadworm.—Diarrhea, nervous irritability, and even fits; picking of the nose, scratching of the fundament, grinding of the teeth during sleep and bed-wetting.

Treatment.—The irritation at the back passage may be relieved by applying weak, white, precipitate ointment. Internally the child should have *one santonin lozenge*, at bed-time, every night, for a week, and a small dose of castor oil in the morning; also injections of warm salt water or sea water into the back passage.

ROUNDWORM.—The roundworm looks something like an ordinary garden worm, only pale yellowish in color. It is about ten inches long. These worms live in the bowels and

feed there; but sometimes one wanders into the stomach and is vomited up, or into the nose, and may even try and get through the nostril. These worms are fond of getting into round openings. They cause a too-great appetite, varied sometimes by a complete loss of appetite, and sometimes diarrhea, and pain in the belly.

Treatment.—To a child give 5 grains of *santonin* in one dose, at bedtime, and a large dose of castor oil in the morning.

Wry-Neck.—In wry-neck the head is twisted to one side. It may be caused by the scars of a burn, or of operations for swollen glands, which drag the head over to one side. But by far the most common sort of wry-neck is caused by a spasm or cramp of the muscle called *sterno-mastoid* which jerks the head to one side, often in a very painful fashion. Tailors and shoemakers are very liable to the complaint. Infants during birth, when the delivery has been difficult, are apt to suffer from a rupture of the *sterno-mastoid* muscle, so that the one on the other side drags the head over to that side.

The cure of every case of wry-neck must depend entirely on its own merits and its causes. We can give no help in these pages.

THE END

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